

NACOmatic

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MN Min Alt#1 -	4	FSE -	137	ULM -	340
MN Min Rdr#1 -	9	GDB -	149	VVV -	346
MN Min TO#1 -	12	GHW -	141	XVG -	185
04W -	163	GPZ -	145		
04Y -	153	GYL -	138		
12D -	454	HCD -	165		
14Y -	184	HCO -	151		
16D -	356	HIB -	155		
21D -	412	HZX -	205		
48Y -	359	INL -	167		
55Y -	389	JKJ -	331		
ACQ -	466	JMR -	335		
ADC -	460	JYG -	409		
AEL -	26	LJF -	179		
AIT -	25	LVN -	253		
ANE -	207	LXL -	182		
AQP -	33	MGG -	196		
AUM -	35	MIC -	260		
AXN -	30	MJQ -	176		
BBB -	49	MKT -	188		
BDE -	41	MML -	200		
BDH -	470	MOX -	336		
BFW -	392	MSP -	268		
BJI -	45	MVE -	330		
BRD -	55	MWM -	475		
CBG -	69	MZH -	333		
CFE -	65	ONA -	478		
CHU -	67	ORB -	344		
CKC -	143	OTG -	483		
CKN -	83	OVL -	342		
CNB -	76	OWA -	348		
COQ -	78	PKD -	352		
CQM -	82	PNM -	364		
D00 -	24	PQN -	360		
D37 -	461	PWC -	357		
D39 -	391	RGK -	367		
D42 -	399	ROS -	387		
DLH -	94	ROX -	383		
DTL -	87	RRT -	462		
DVP -	394	RST -	373		
DXX -	187	RWF -	371		
DYT -	109	RYM -	70		
ELO -	111	SAZ -	445		
ETH -	469	SBU -	54		
EVM -	116	SGS -	395		
FBL -	127	STC -	400		
FCM -	229	STP -	415		
FFM -	131	TKC -	456		
FKA -	363	TOB -	91		
FOZ -	52	TVF -	446		
FRM -	119	TWM -	458		

INSTRUMENT APPROACH PROCEDURE CHARTS



IFR ALTERNATE AIRPORT MINIMUMS

Standard alternate minimums for non precision approaches are 800-2 (NDB, VOR, LOC, TACAN, LDA, VORTAC, VOR/DME, ASR or WAAS LNAV); for precision approaches 600-2 (ILS or PAR). Airports within this geographical area that require alternate minimums other than standard or alternate minimums with restrictions are listed below. NA - means alternate minimums are not authorized due to unmonitored facility or absence of weather reporting service. Civil pilots see FAR 91. IFR Alternate Airport Minimums: Ceiling and Visibility Minimums not applicable to USA/USN/USAF. Pilots must review the IFR Alternate Airport Minimums Notes for alternate airfield suitability.

NAME	ALTERNATE MINIMUMS	NAME	ALTERNATE MINIMUMS
ABERDEEN, SD		BISMARCK, ND	
ABERDEEN RGNL	RNAV (GPS) Rwy 13	BISMARCK MUNI	ILS Rwy 13¹²
	RNAV (GPS) Rwy 31		ILS Rwy 31¹²
	RNAV (GPS) Rwy 35		RADAR-1³
	VOR Rwy 31		¹ ILS, Category D, 800-2½; Category E, 900-3.
	VOR/DME Rwy 13		LOC, NA.
NA when local weather not available.			² NA when control tower not in operation.
			³ NA when control tower closed.
ALBERT LEA, MN		BRAINERD, MN	
ALBERT LEA MUNI	RNAV (GPS) Rwy 16	BRAINERD LAKES RGNL ...	ILS or LOC Rwy 23
NA when local weather not available.			RNAV (GPS) Rwy 12
			RNAV (GPS) Rwy 23
ALEXANDRIA, MN			RNAV (GPS) Rwy 30
CHANDLER FIELD	RNAV (GPS) Rwy 31		RNAV (GPS) Rwy 34
NA when local weather not available.			
			NA when local weather not available.
AUSTIN, MN		BROOKINGS, SD	
AUSTIN MUNI	RNAV (GPS) Rwy 17	BROOKINGS RGNL	RNAV (GPS) Rwy 12
	RNAV (GPS) Rwy 35		RNAV (GPS) Rwy 30
	VOR/DME-A		
NA when local weather not available.			NA when local weather not available.
BAUDETTE, MN		CANBY, MN	
BAUDETTE INTL	RNAV (GPS) Rwy 30¹	MYERS FIELD	RNAV (GPS) Rwy 12
	VOR/DME Rwy 12²		RNAV (GPS) Rwy 30
	VOR Rwy 30²		NA when local weather not available.
¹ NA when local weather not available.		CLOQUET, MN	
² Category C, 800-2½; Category D, 800-2½.		CLOQUET CARLTON	
BEMIDJI, MN		COUNTY	RNAV (GPS) Rwy 35
BEMIDJI RGNL	RNAV (GPS) Rwy 13		NA when local weather not available.
	RNAV (GPS) Rwy 31		
NA when local weather not available.		COOK, MN	
BENSON, MN		COOK MUNI	RNAV (GPS) Rwy 31
BENSON MUNI	RNAV (GPS) Rwy 14		NA when local weather not available.
	RNAV (GPS) Rwy 32	CROOKSTON, MN	
NA when local weather not available.		CROOKSTON MUNI-	
		KIRKWOOD FIELD	RNAV (GPS) Rwy 13¹
			RNAV (GPS) Rwy 31¹
			VOR Rwy 31²
			¹ NA when local weather not available.
			² Category A,B, 900-2; Category C, 900-2½.

NAME ALTERNATE MINIMUMS

DETROIT LAKES, MN

DETROIT LAKES-

WETHING FIELD RNAV (GPS) Rwy 13
RNAV (GPS) Rwy 31

NA when local weather not available.

Category D, 800-2¼.

DEVILS LAKE, ND

DEVILS LAKE RGNL RNAV (GPS) Rwy 3
RNAV (GPS) Rwy 13
RNAV (GPS) Rwy 31
VOR Rwy 31
VOR Rwy 21²

NA when local weather not available.

¹Categories A,B, 900-2; Category C, 900-2½;

Category D, 900-2¼.

²Category C, 800-2¼, Category D, 800-2½.

DICKINSON, ND

DICKINSON-THEODORE

ROOSEVELT RGNL RNAV (GPS) Rwy 14
RNAV (GPS) Rwy 32
VOR-A

NA when local weather not available.

DODGE CENTER, MN

DODGE CENTER RNAV (GPS) Rwy 16
RNAV (GPS) Rwy 34
VOR-A

NA when local weather not available.

DULUTH, MN

DULUTH INTL COPTER ILS Rwy 9
COPTER ILS Rwy 27
ILS Rwy 9

LOC, NA.

EVELETH, MN

EVELETH-VIRGINIA

MUNI VOR/DME or GPS-A
Category C, 800-2¼; Category D, 800-2½.

FAIRMONT, MN

FAIRMONT MUNI RNAV (GPS) Rwy 13
RNAV (GPS) Rwy 31
VOR Rwy 13
VOR Rwy 31

NA when local weather not available.

NAME ALTERNATE MINIMUMS

FARGO, ND

HECTOR INTL ILS or LOC Rwy 18¹
ILS or LOC Rwy 36¹
RNAV (GPS) Rwy 18²
RNAV (GPS) Rwy 36²
VOR/DME or TACAN Rwy 18²
VOR or TACAN Rwy 36³

¹ILS, Category E, 700-2¼. LOC, Category E, 800-2¼.

²Category E, 800-2¼.

³Category D, 800-2¼, Category E, 800-2¼.

FERGUS FALLS, MN

FERGUS FALLS MUNI-EINAR

MICKELSON FIELD ILS or LOC Rwy 31¹
NDB Rwy 31²
RNAV (GPS) Rwy 31²
RNAV (GPS) Rwy 35

NA when local weather not available.

¹ILS, Category D, 700-2¼. LOC, Category D, 800-2¼.

²Category D, 800-2¼.

GLENCOE, MN

GLENCOE MUNI RNAV (GPS) Rwy 31
NA when local weather not available.

GRAND FORKS, ND

GRAND FORKS INTL ... ILS or LOC Rwy 35L¹²
LOC BC Rwy 17R¹
RNAV (GPS) Rwy 9L³
RNAV (GPS) Rwy 17R³
RNAV (GPS) Rwy 27R³
RNAV (GPS) Rwy 35L³
VOR Rwy 17R³
VOR Rwy 35L³

¹NA when control tower closed.

²ILS, Category E, 700-2½. LOC, Category E, 800-2¼.

³NA when local weather not available.

GRAND MARAIS, MN

GRAND MARAIS/

COOK COUNTY RNAV (GPS) Rwy 27
NA when local weather not available.

GRAND RAPIDS, MN

GRAND RAPIDS/ITASCA CO-

GORDON NEWSTROM RNAV (GPS) Rwy 16
RNAV (GPS) Rwy 34
VOR Rwy 34

NA when local weather not available.

NAME ALTERNATE MINIMUMS
HIBBING, MN
CHISHOLM-
HIBBING ILS OR LOC/DME Rwy 13¹
VOR Rwy 13²

¹ILS, Categories A, B, C, D, 800-2.

²Categories A, B, 900-2; Category C, 900-2½;
Category D, 900-2¾; ILS, 700-2.

HURON, SD
HURON RGNL ILS or LOC Rwy 12¹²
LOC/DME BC Rwy 30²³
RNAV (GPS) Rwy 12²³
RNAV (GPS) Rwy 30²³
VOR Rwy 12²³

¹ILS, Category D, 700-2¼. LOC, Category D, 800-2¼.

²NA when local weather not available.

³Category D, 800-2¼.

INTERNATIONAL FALLS, MN
FALLS INTL COPTER ILS or LOC Rwy 31¹
ILS or LOC/DME Rwy 13,700-2²
ILS or LOC Rwy 31²
RNAV (GPS) Rwy 13²
RNAV (GPS) Rwy 31²
VOR Rwy 13²³
VOR/DME Rwy 31²

¹LOC, NA; ILS, NA when local weather not available.

²NA when local weather not available.

³Category D, 800-2¼.

JACKSON, MN
JACKSON MUNI RNAV (GPS) Rwy 13
RNAV (GPS) Rwy 31
NDB Rwy 13
NA when local weather not available.

JAMESTOWN, ND
JAMESTOWN RGNL RNAV (GPS) Rwy 4
RNAV (GPS) Rwy 13
RNAV (GPS) Rwy 22
RNAV (GPS) Rwy 31
VOR Rwy 31
NA when local weather not available.

MANKATO, MN
MANKATO RGNL RNAV (GPS) Rwy 4
RNAV (GPS) Rwy 15
RNAV (GPS) Rwy 22
RNAV (GPS) Rwy 33
VOR Rwy 15
VOR Rwy 33
NA when local weather not available.

MAPLE LAKE, MN
MAPLE LAKE MUNI VOR-A
NA when local weather not available.

NAME ALTERNATE MINIMUMS
MARSHALL, MN
SOUTHWEST MINNESOTA RGNL MARSHALL/
RYAN FLD RNAV (GPS) Rwy 12
VOR Rwy 12
NA when local weather not available.

MINNEAPOLIS, MN
ANOKA COUNTY-BLAINE ARPT
(JANES FIELD) ILS or LOC/DME Rwy 27
RNAV (GPS) Rwy 9
RNAV (GPS) Rwy 18
RNAV (GPS) Rwy 27
VOR Rwy 9
VOR/DME Rwy 27
NA when local weather not available.

CRYSTAL RNAV (GPS) Rwy 14L
NA when local weather not available.

FLYING
CLOUD COPTER ILS or LOC Rwy 10R¹
RNAV (GPS) Rwy 10L²
RNAV (GPS) Rwy 28R²
VOR Rwy 36³

¹NA when control tower closed.

²NA when local weather not available.

³Category C, 800-2¼; Category D, 800-2½.

MINNEAPOLIS-ST. PAUL INTL/
WOLD CHAMBERLAIN ILS Rwy 4¹
ILS or LOC Rwy 12L¹
ILS or LOC Rwy 12R¹
ILS or LOC Rwy 30L¹
ILS or LOC Rwy 30R¹
ILS or LOC Rwy 35²
LOC Rwy 4³
LOC Rwy 22³
RNAV (GPS) Rwy 4³
RNAV (GPS) Rwy 12L³
RNAV (GPS) Rwy 12R³
RNAV (GPS) Rwy 22³
RNAV (GPS) Rwy 30L³
RNAV (GPS) Rwy 30R³
RNAV (GPS) Z Rwy 35⁴

¹ILS, Category D, 700-2; Category E, 900-3.
LOC, Category E, 900-3.

²ILS, Categories A, B, C, D, 700-2; Category E, 900-3. LOC, Category E, 900-3.

³Category E, 900-3.

⁴Category D, 800-2¼.

MINOT, ND
MINOT INTL ILS or LOC Rwy 31¹²
LOC/DME BC Rwy 13¹
RNAV (GPS) Rwy 13
RNAV (GPS) Rwy 31
NA when local weather not available.

¹NA when tower closed.

NAME **ALTERNATE MINIMUMS**
MITCHELL, SD
 MITCHELL MUNI RNAV (GPS) Rwy 12
 RNAV (GPS) Rwy 30
 VOR Rwy 12
 VOR Rwy 30¹

NA when local weather not available.

¹Categories A,B, 1000-2; Categories C,D, 1000-3.

MOBRIDGE, SD
 MOBRIDGE MUNI RNAV (GPS) Rwy 12¹
 RNAV (GPS) Rwy 30²

NA when local weather not available

¹Category D, 900-2¾.

²Category C, 800-2¼; Category D, 900-2¾.

MORRIS, MN
 MORRIS MUNI-CHARLIE
 SCHMIDT FLD RNAV (GPS) Rwy 14
 RNAV (GPS) Rwy 32

NA when local weather not available.

PINE RIDGE, SD
 PINE RIDGE RNAV (GPS) Rwy 30
 NA when local weather not available.
 Categories A,B, 900-2.

PIPESTONE, MN
 PIPESTONE MUNI NDB Rwy 36
 RNAV (GPS) Rwy 18
 RNAV (GPS) Rwy 36

NA when local weather not available.

PRESTON, MN
 FILLMORE COUNTY RNAV (GPS) Rwy 29
 NA when local weather not available.

RAPID CITY, SD
 RAPID CITY RGNL ILS or LOC Rwy 32¹
 RNAV (GPS) Rwy 14²
 RNAV (GPS) Rwy 32
 VOR or TACAN Rwy 14²
 VOR or TACAN Rwy 32²

NA when local weather not available.

¹ILS, Category D, 700-2; Category E, 700-2¼.

LOC, Category E, 800-2¼.

²Category E, 800-2¼.

REDWOOD FALLS, MN
 REDWOOD FALLS
 MUNI RNAV (GPS) Rwy 30
 VOR-A

Category D, 800-2¼.

NA when local weather not available.

NAME **ALTERNATE MINIMUMS**
ROCHESTER, MN
 ROCHESTER INTL ILS or LOC Rwy 13
 ILS or LOC Rwy 31
 COPTER ILS or LOC Rwy 31
 NA when control tower closed.

ROSEAU, MN
 ROSEAU MUNI/
 RUDY BILLBERG FIELD ... RNAV (GPS) Rwy 16
 RNAV (GPS) Rwy 34
 NA when local weather not available.

ST. CLOUD, MN
 ST. CLOUD RGNL .. ILS or LOC/DME Rwy 13¹²³
 RNAV (GPS) Rwy 5¹
 RNAV (GPS) Rwy 13¹
 RNAV (GPS) Rwy 23¹
 RNAV (GPS) Rwy 31¹
 VOR/DME Rwy 13¹²
 VOR Rwy 31¹²

¹NA when local weather not available.

²NA when control tower closed.

³ILS, Categories, A, B, C, D, 700-2.

ST. PAUL, MN
 ST. PAUL DOWNTOWN HOLMAN
 FIELD COPTER ILS or LOC Rwy 32¹
 ILS or LOC Rwy 14¹²
 ILS or LOC Rwy 32¹²
 RNAV (GPS) Rwy 14²
 RNAV (GPS) Rwy 32³

NA when control tower closed.

²Categories A,B, 900-2; Category C, 900-2¼;

Category D, 900-2¼.

³Categories A,B,C, 900-2¼; Category D, 900-2¼.

SIOUX FALLS, SD
 JOE FOSS FIELD ILS Rwy 31²
 ILS Rwy 21¹
 RADAR-1³
 VOR or TACAN Rwy 15⁴
 VOR/DME or TACAN Rwy 33³

¹NA when control tower closed.

²LOC, NA.

³Category E, 800-2¼.

⁴Category E, 900-3.

SOUTH ST. PAUL, MN
 SOUTH ST. PAUL MUNI-RICHARD E
 FLEMING FIELD RNAV (GPS) Rwy 34
 Category D, 800-2¼.
 NA when local weather not available.



NAME	ALTERNATE MINIMUMS
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WILLMAR, MN

WILLMAR MUNI-JOHN
L RICE FIELD RNAV (GPS) Rwy 13
RNAV (GPS) Rwy 31
VOR Rwy 13
VOR Rwy 31'

NA when local weather not available.

¹Category D, 800-2¼.

WINNER, SD

WINNER RGNL RNAV (GPS) Rwy 13
RNAV (GPS) Rwy 31
VOR-A

NA when local weather not available

WORTHINGTON, MN

WORTHINGTON
MUNI VOR or GPS Rwy 11
Category D, 800-2¼.

YANKTON, SD

CHAN GURNEY MUNI ... RNAV (GPS) Rwy 13¹
VOR Rwy 13¹
VOR Rwy 31²

¹NA when local weather not available.²Category D, 800-2¼.

WATERTOWN RGNL LOC/DME BC Rwy 17
NDB Rwy 35
RNAV (GPS) Rwy 12
RNAV (GPS) Rwy 17
RNAV (GPS) Rwy 30
RNAV (GPS) Rwy 35
VOR or TACAN Rwy 17

NA when local weather not available.

WILLISTON, ND

SLOULIN FIELD INTL.....VOR or GPS Rwy 11
Category D, 800-2¼.

RADAR INSTRUMENT APPROACH MINIMUMS

BISMARCK, ND

Amdt. 3A, DEC 13, 2002 (FAA)

ELEV 1661

BISMARCK MUNI

RADAR - 126.3 298.9 

				DA/ HATh/	HAT/ HATH/			DA/ HATh/	HAT/ HATH/	
	RWY	GS/TCH/RPI	CAT	MDA-VIS	HAA	CEIL-VIS	CAT	MDA-VIS	HAA	CEIL-VIS
ASR	13		AB	2100-1	445	(500-1)	C	2100-1¼	445	(500-1¼)
			D	2100-1½	445	(500-1½)				
	31		AB	2100/24	455	(500-½)	C	2100/40	455	(500-¾)
			D	2100/50	455	(500-1)				
	21		AB	2120-1	459	(500-1)	C	2120-1¼	459	(500-1¼)
			D	2120-1½	459	(500-1½)				
	3		AB	2120-1	459	(500-1)	C	2120-1¼	459	(500-1¼)
			D	2120-1½	459	(500-1½)				
CIRCLING			A	2180-1	519	(600-1)	B	2220-1	539	(600-1)
			C	2220-1½	559	(600-1½)	D	2240-2	579	(600-2)

Inoperative table does not apply to MALS Rwy 13.

DULUTH, MN

Amdt. 20, OCT 7, 1999 (FAA)

ELEV 1428

DULUTH INTL

RADAR - 125.45 255.9

				DA/ HATh/	HAT/ HATH/			DA/ HATh/	HAT/ HATH/	
	RWY	GS/TCH/RPI	CAT	MDA-VIS	HAA	CEIL-VIS	CAT	MDA-VIS	HAA	CEIL-VIS
ASR	3		ABC	1820-1	400	(400-1)	D	1820-1¼	400	(400-1¼)
			E	1820-1½	400	(400-1½)				
	27		AB	1860/24	439	(500-½)	C	1860/40	439	(500-¾)
			DE	1860/50	439	(500-1)				
	21		AB	1860-1	440	(500-1)	C	1860-1¼	440	(500-1¼)
			DE	1860-1½	440	(500-1½)				
	9		AB	1880/24	452	(500-½)	C	1880/40	452	(500-¾)
			DE	1880/50	452	(500-1)				
CIRCLING			AB	1920-1	492	(500-1)	C	1920-1½	492	(500-1½)
			DE	1980-2	552	(600-2)				

Category E circling NA southeast of Rwy 3 and 27.

RADAR INSTRUMENT APPROACH MINIMUMS

ELLSWORTH AFB (KRCA) (Rapid City), SD (Amdt 1, 08045 USAF)

ELEV 3276

RADAR - (E) 119.5 259.1¹

				DH/ MDA-VIS	HAT/ HATH/ HAA	CEIL-VIS
ASR	<u>RWY</u>	<u>GS/TCH/RPI</u>	<u>CAT</u>			
	13 ²		AB	3820/40	544	(600-¾)
			C	3820/50	544	(600-1)
			D	3820/60	544	(600-1¼)
			E	3820-1½	544	(600-1½)
	31 ²		AB	3820/40	628	(600-¾)
			C	3820/60	628	(600-1¼)
			D	3820-1½	628	(600-1½)
			E	3820-1¾	628	(600-1¾)
CIR	All Rwy ³		A	3860-1¼	584	(600-1¼)
			B	3880-1¼	604	(700-1¼)
			C	3880-1¾	604	(700-1¾)
			D	3880-2	604	(700-2)
			E	4040-2¾	764	(800-2¾)

¹Opr 1300-0730Z++ Mon-Thu, 1300-0500Z++ Fri. 1400-0500Z++ Sat, Sun and hol. ²When ALS inop, increase CAT AB RVR to 60 and vis to 1¼, increase CAT CDE vis ½ mile. ³CAT E circling restricted to 28th BW aircraft only; 28th BW aircraft will remain within class D airspace.

MANDAN, ND

Amdt. 4, NOV 09, 1995 (FAA)

ELEV 1942

MANDAN MUNI

RADAR - 126.3 298.9  NA

	<u>RWY</u>	<u>GS/TCH/RPI</u>	<u>CAT</u>	<u>DA/</u> <u>MDA-VIS</u>	<u>HAT/</u> <u>HATH/</u> <u>HAA</u>	<u>CEIL-VIS</u>	<u>CAT</u>	<u>DA/</u> <u>MDA-VIS</u>	<u>HAT/</u> <u>HATH/</u> <u>HAA</u>	<u>CEIL-VIS</u>
ASR	31		AB	2360-1	418	(500-1)	CD	2360-1¼	418	(500-1¼)
	13		AB	2460-1	520	(600-1)	C	2460-1½	520	(600-1½)
			D	2460-1¾	520	(600-1¾)				
CIRCLING			A	2460-1	518	(600-1)	B	2500-1	558	(600-1)
			C	2500-1½	558	(600-1½)	D	2500-2	558	(600-2)

Use Bismarck altimeter setting.

When Bismarck control tower closed, ASR NA.

RADAR INSTRUMENT APPROACH MINIMUMS

ROCHESTER, MN ROCHESTER INTL

Amdt. 8, JAN 15, 2009 (FAA)

ELEV 1317

RADAR - 119.8 251.125 ▽

			DA/ MDA-VIS	HAT/ HATH/ HAA	CEIL-VIS	CAT	DA/ MDA-VIS	HAT/ HATH/ HAA	CEIL-VIS
ASR	RWY GS/TCH/RP	CAT							
	2	ABC	1680-1	363	(400-1)	D	1680-1¼	363	(400-1¼)
	13	ABC	1640/24	360	(400-½)	D	1640/50	360	(400-1)
	20	ABC	1660-1	356	(400-1)	D	1660-1¼	356	(400-1¼)
	31	ABC	1660/24	356	(400-½)	D	1660/50	356	(400-1)
CIRCLING		A	1720-1	403	(500-1)	B	1780-1	463	(500-1)
		C	1780-1½	463	(500-1½)	D	1880-2	563	(600-2)

When control tower closed, procedure NA. For inoperative MALSR, increase S-13 and S-31 Cat D visibility to RVR 6000. Visibility reduction by helicopters NA Rwy 2-20.

SIOUX FALLS, SD JOE FOSS FIELD

Amdt. 10A, OCT 3, 2003 (FAA)

ELEV 1429

RADAR - 125.8 353.6 ▽ ▲

			DA/ MDA-VIS	HAT/ HATH/ HAA	CEIL-VIS	CAT	DA/ MDA-VIS	HAT/ HATH/ HAA	CEIL-VIS
ASR	RWY GS/TCH/RPI	CAT							
	3	AB	1940/24	517	(600-½)	C	1940/50	517	(600-1)
		DE	1940/60	517	(600-1¼)				
	33	AB	1920-1	497	(500-1)	C	1920-1¼	497	(500-1¼)
		D	1920-1½	497	(500-1½)	E	1920-1¾	497	(500-1¾)
	21	AB	1960/24	531	(600-½)	C	1960/50	531	(600-1)
		D	1960/60	531	(600-1¼)	E	1960-1½	531	(600-1½)
	15	AB	1960-1	534	(600-1)	C	1960-1½	534	(600-1½)
		D	1960-1¾	534	(600-1¾)	E	1960-2	534	(600-2)
CIRCLING		AB	1960-1	531	(600-1)	C	1960-1½	531	(600-1½)
		D	2040-2	611	(700-2)	E	2300-3	871	(900-3)

When control tower closed, procedure not authorized.

Category E S-3 visibility increased 1¼ mile for inoperative MALSR.

Category E S-21 visibility increased to 2 miles for inoperative MALSR.



INSTRUMENT APPROACH PROCEDURE CHARTS



IFR TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

Civil Airports and Selected Military Airports

ALL USERS: Airports that have Departure Procedures (DPs) designed specifically to assist pilots in avoiding obstacles during the climb to the minimum enroute altitude, and/or airports that have civil IFR take-off minimums other than standard, are listed below. Take-off Minimums and Departure Procedures apply to all runways unless otherwise specified. Altitudes, unless otherwise indicated, are minimum altitudes in MSL.

DPs specifically designed for obstacle avoidance are referred to as Obstacle Departure Procedures (ODPs) and are described below in text, or published separately as a graphic procedure. If the (Obstacle) DP is published as a graphic procedure, its name will be listed below, and it can be found in either this volume (civil), or a separate Departure Procedure volume (military), as appropriate. Users will recognize graphic obstacle DPs by the term "(OBSTACLE)" included in the procedure title; e.g., TETON TWO (OBSTACLE). If not assigned a SID or radar vector by ATC, an ODP may be flown without ATC clearance to ensure obstacle clearance.

Graphic DPs designed by ATC to standardize traffic flows, ensure aircraft separation and enhance capacity are referred to as "Standard Instrument Departures (SIDs)". SIDs also provide obstacle clearance and are published under the appropriate airport section. ATC clearance must be received prior to flying a SID.

CIVIL USERS NOTE: Title 14 Code of Federal Regulations Part 91 prescribes standard take-off rules and establishes take-off minimums for certain operators as follows: (1) Aircraft having two engines or less - one statute mile. (2) Aircraft having more than two engines - one-half statute mile. These standard minima apply in the absence of any different minima listed below.

MILITARY USERS NOTE: Civil (nonstandard) take-off minima are published below. For military take-off minima, refer to appropriate service directives.

NAME TAKE-OFF MINIMUMS

ABERDEEN, SD

ABERDEEN RGNL (ABR)

ORIG 09239 (FAA)

NOTE: **Rwy 17**, trees 1138' from DER, 432' right of centerline, 41' AGL/1336' MSL. **Rwy 31**, multiple trees beginning 1391' from DER, 326' left of centerline, up to 65' AGL/1360' MSL.

AITKIN, MN

AITKIN MUNI-STEVE KURTZ FIELD (AIT)

AMDT 2 96172 (FAA)

TAKE-OFF MINIMUMS: **Rwys 8, 26**, 300-1. **Rwy 16**, 300-1 or std. with a min climb of 400' per NM to 1500.

DEPARTURE PROCEDURE: **Rwys 16, 26**, climb runway heading to 1700 before turning.

ALBERT LEA, MN

ALBERT LEA MUNI (AEL)

ORIG 85241 (FAA)

DEPARTURE PROCEDURE: **Rwys 16, 22**, climb runway heading to 1800 before turning on course.

ALEXANDRIA, MN

CHANDLER FIELD (AXN)

DEPARTURE PROCEDURE: **Rwys 4, 13, 22**, when weather is below 200-1, climb runway heading to 1800 before turning.

NAME TAKE-OFF MINIMUMS

APPLETON, MN

APPLETON MUNI (AQP)

ORIG 94146 (FAA)

DEPARTURE PROCEDURE: **Rwy 4**, climb to 2000 before turning right. **Rwy 31**, climb to 2000 before turning left.

Rwy 13, climb to 2400 before turning right. **Rwy 22**, climb to 2400 before turning left.

AUSTIN, MN

AUSTIN MUNI (AUM)

ORIG 08045 (FAA)

NOTE: **Rwy 17**, Multiple trees beginning 809' from departure end of runway, 663' right of centerline, up to 61' AGL/1285' MSL. **Rwy 35**, Tree 1380' from departure end of runway, 484' right of centerline, 100' AGL/1314' MSL.

BAUDETTE, MN

BAUDETTE INTL (BDE)

ORIG 01193 (FAA)

DEPARTURE PROCEDURE: **Rwy 12**, climb runway heading to 1700 before turning northbound.

BELLEFOURCHE, SD

BELLE FOURCHE MUNI (EFC)
AMDT 2 09015 (FAA)

TAKE-OFF MINIMUMS: **Rwys 18,36**, NA. **Rwy 14**, std. w/min. climb of 240' per NM to 9000 or 1400-3 for climb in visual conditions. **Rwy 32**, std. w/min. climb of 413' per NM to 3900.

DEPARTURE PROCEDURE: **Rwy 14**, for climb in visual conditions: cross Belle Fourche Muni airport at or above 4400 MSL before proceeding on course. **Rwy 32**, climb heading 321° to 3900 before proceeding southbound.

NOTE: **Rwy 14**, trees 651' from departure end of runway, 547' left of centerline, up to 20' AGL/3299' MSL. **Rwy 32**, trees 857' from departure end of runway, 150' left of centerline, up to 20' AGL/3199' MSL. Trees 3880' from departure end of runway, 966' right of centerline, up to 20' AGL/3289' MSL.

BEMIDJI, MN

BEMIDJI RGNL (BJI)
AMDT 3 08213 (FAA)

NOTE: **Rwy 7**, vegetation beginning 859' from departure end of runway, 544' right of centerline, up to 62' AGL/1442' MSL. Vegetation beginning 1404' from departure end of runway, 683' left of centerline, up to 44' AGL/1424' MSL. **Rwy 13**, vehicle on road, 541' from departure end of runway, 525' right of centerline, 15' AGL/1398' MSL. **Rwy 25**, poles beginning 1337' from departure end of runway, 205' right of centerline up to 61' AGL/1445' MSL. Trees beginning 1414' from departure end of runway, 254' left of centerline, up to 57' AGL/1441' MSL. Tree 1406' from departure end of runway, 233' right of centerline, 53' AGL/1437' MSL.

BENSON, MN

BENSON MUNI (BBB)
AMDT 1 09127 (FAA)

NOTE: **Rwy 14**, numerous trees beginning 838' from DER, 246' right of centerline, up to 33' AGL/1087' MSL. Numerous trees beginning 1232' from DER, 64' left of centerline, up to 69' AGL/1108' MSL. Sign 206' from DER, 198' left of centerline, 19' AGL/1044' MSL. Tower 4884' from DER, 274' right of centerline, 126' AGL/1161' MSL. **Rwy 32**, Tree 2380' from DER, 646' left of centerline, 68' AGL/1107' MSL. Multiple fences beginning 13' from DER, 361' left of centerline, up to 8' AGL/1043' MSL.

BIGFORK, MN

BIGFORK MUNI (FOZ)
ORIG 97198 (FAA)

TAKE-OFF MINIMUMS: **Rwy 15**, 400-1 or std. with a min. climb of 250' per NM to 1800.

BISMARCK, ND

BISMARCK MUNI (BIS)
AMDT 7 01137 (FAA)

DEPARTURE PROCEDURE: **Rwys 3,31**, climb runway heading to 2500 before proceeding on course. **Rwys 13,21**, climb runway heading to 3800 before proceeding south.

BOTTINEAU, ND

BOTTINEAU MUNI (D09)
ORIG 98113 (FAA)

TAKE-OFF MINIMUMS: **Rwy 13**, 800-1 or std. with a min. climb of 280' per NM to 2500. **Rwy 31**, 900-2 or std. with a min. climb of 360' per NM to 2900. **Rwys 3,21**, NA.

BRAINERD, MN

BRAINERD LAKES RGNL (BRD)
AMDT 5 07074 (FAA)

NOTE: **Rwy 12**, multiple trees beginning 165' from departure end of runway, 417' left of centerline, up to 78' AGL/1279' MSL. Multiple trees and vehicle on road beginning 304' from departure end of runway, 206' right of centerline, up to 66' AGL/1277' MSL. **Rwy 16**, multiple trees beginning 1830' from departure end of runway, 749' left of centerline, up to 74' AGL/1314' MSL. **Rwy 23**, multiple trees beginning 1495' from departure end of runway, 179' left of centerline, up to 48' AGL/1285' MSL. Tree 2437' from departure end of runway, 716' right of centerline, 50' AGL/1279' MSL. **Rwy 30**, multiple trees beginning 243' from departure end of runway, 131' left of centerline, up to 61' AGL/1287' MSL. Multiple trees 48' from departure end of runway, 328' right of centerline, up to 59' AGL/1329' MSL.

BRITTON, SD

BRITTON MUNI (BTN)
AMDT 2 96060 (FAA)

TAKE-OFF MINIMUMS: **Rwy 13**, 300-1 or std. with a min. climb of 450' per NM to 1600. **Rwy 19**, 300-1. DEPARTURE PROCEDURE: **Rwy 19**, climb runway heading to 2000 before turning.

BROOKINGS, SD

BROOKINGS RGNL (BKX)
ORIG 09015 (FAA)

NOTE: **Rwy 12**, pole and trees beginning 1041' from departure end of runway, 207' left of centerline, up to 65' AGL/1705' MSL. Building 1277' from departure end of runway, 825' right of centerline, 38' AGL/1618' MSL. **Rwy 17**, vehicle on road 799' from departure end of runway, on centerline, up to 15' AGL/1687' MSL. Trees beginning 906' from departure end of runway, 464' left of centerline, up to 100' AGL/1749' MSL. **Rwy 30**, railroad beginning 547' from departure end of runway, 502' right of centerline, 23' AGL/1626' MSL. Tree 132' from departure end of runway, 433' left of centerline, 20' AGL/1615' MSL. **Rwy 35**, trees 2892' from departure end of runway, 944' right of centerline, up to 100' AGL/1709' MSL.

CANBY, MN

MYERS FIELD (CNB)
ORIG 07186 (FAA)

NOTE: **Rwy 12**, truck on road 183' from departure end of runway, 220' right of centerline, 15' AGL/1204' MSL.

CASSELTON, ND

CASSELTON ROBERT MILLER RGNL (5N8)
ORIG 07354 (FAA)

TAKE-OFF MINIMUMS: **Rwy 31**, 400-2½ or std. w/a min. climb of 212' per NM to 1400 or alternatively, with standard takeoff minimums and a normal 200'/NM climb gradient, takeoff must occur no later than 1700' prior to departure end of runway.

NOTE: **Rwy 13**, railroad 30' from departure end of runway, 505' right of centerline, 23' AGL/945' MSL. Vehicle on road 449' from departure end of runway, 300' left of centerline, 15' AGL/949' MSL. **Rwy 31**, trees 2251' from departure end of runway, 456' left of centerline, up to 100' AGL/1052' MSL.

CAVALIER, ND

CAVALIER MUNI (2C8)
ORIG 03191 (FAA)

TAKE-OFF MINIMUMS: **Rwy 16**, 300-1 or std. with a min. climb of 430' per NM to 1200.

NOTE: **Rwy 16**, grain elevator 3731' from departure end of runway, 284' left of centerline, 168' AGL/1060' MSL.

CLOQUET, MN

CLOQUET CARLTON COUNTY (COQ)
AMDT 1 80248 (FAA)

TAKE-OFF MINIMUMS: **Rwy 7**, 300-1 or std. with a min. climb of 400' per NM to 1400.

CROOKSTON, MN

CROOKSTON MUNI-KIRKWOOD FIELD (CKN)
AMDT 2 07298 (FAA)

TAKE-OFF MINIMUMS: **Rwys 6, 17, 24, 35**, NA-turf runways.

NOTE: **Rwy 13**, tree 1998' from departure end of runway, 587' left of centerline, 94' AGL/970' MSL. Pole 1127' from departure end of runway, 662' left of centerline, 46' AGL/926' MSL.

DETROIT LAKES, MN

DETROIT LAKES-WETHING FIELD (DTL)
ORIG 05132 (FAA)

TAKE-OFF MINIMUMS: **Rwys 17, 35**, NA.

NOTE: **Rwy 31**, highway 243' from departure end of runway, 267' right of centerline, 15' AGL/1404' MSL. Railroad 534' from departure end of runway, 298' right of centerline, 23' AGL/1411' MSL.

DEVILS LAKE, ND

DEVILS LAKE RGNL (DVL)
AMDT 1A 09351 (FAA)

TAKE-OFF MINIMUMS: **Rwy 31**, 300-1 or std. with a min. climb of 350' per NM to 1600.

NOTE: **Rwy 3**, tree 1528' from DER, 319' left of centerline, 100' AGL/1490' MSL. Tree 1520' from DER, 136' right of centerline, 100' AGL/1489' MSL. **Rwy 13**, bush 266' from DER, 523' left of centerline, 17' AGL/1451' MSL. Road, light pole and antenna on building beginning 95' from DER, 414' right of centerline, up to 17' AGL/1484' MSL. **Rwy 21**, roads beginning 335' from DER, 2' right of centerline, 15' AGL/1447' MSL, multiple poles, trees and towers beginning 552' from DER 355' left of centerline, up to 123' AGL/1548' MSL. **Rwy 31**, road 470' from DER, 424' right of centerline, 15' AGL/1472' MSL. Multiple poles and trees beginning 1180' from DER, 354' left of centerline, up to 49' AGL/1545' MSL.

DICKINSON, ND

DICKINSON-THEODORE ROOSEVELT RGNL (DIK)

AMDT 1 05244 (FAA)

DEPARTURE PROCEDURE: **Rwy 25**, climb via heading 250° to 3100 before turning left.

NOTE: **Rwy 7**, road 887' from departure end of runway, on rwy centerline, 15' AGL/2631' MSL.

DODGE CENTER, MN

DODGE CENTER (TOB)
ORIG 09015 (FAA)

TAKE-OFF MINIMUMS: **Rwy 22**, NA-Environmental.

NOTE: **Rwy 16**, trees 3945' from departure end of runway, 1542' left of centerline, 100' AGL/1409' MSL.

DULUTH, MN

DULUTH INTL (DLH)
ORIG 06327 (FAA)

NOTE: **Rwy 3**, multiple trees beginning 21' from departure end of runway, 226' right of centerline, up to 68' AGL/1477' MSL. Multiple trees beginning 246' from departure end of runway, 26' left of centerline, up to 64' AGL/1473' MSL. **Rwy 9**, electrical equipment 207' from departure end of runway, 408' left of centerline, 6' AGL/1425' MSL. **Rwy 21**, tower 3762' from departure end of runway, 410' left of centerline, 92' AGL/1522' MSL. **Rwy 27**, tree 2426' from departure end of runway, 1127' right of centerline, 53' AGL/1522' MSL. Bush and multiple trees beginning 347' from departure end of runway, 484' left of centerline, up to 44' AGL/1533' MSL.

SKY HARBOR (DYT)

ORIG 83174 (FAA)

TAKE-OFF MINIMUMS: **Rwy 14**, 300-1. **Rwy 32**, 1500-2 or std. with a min. climb of 360' per NM to 2300.

DEPARTURE PROCEDURE: **Rwy 14**, northwest departures (260° CW 030°) climb to 2300 via heading 260° or 030° before proceeding on course.

EAGLE BUTTE, SD

CHEYENNE EAGLE BUTTE (84D)
ORIG 96228 (FAA)

TAKE-OFF MINIMUMS: **Rwys 13, 31**, 300-1.

ELY, MN

ELY MUNI (ELO)

AMDT 2 97086 (FAA)

TAKE-OFF MINIMUMS: **Rwy 12**, 300-1 or std. with a min. climb of 200' per NM to 1600.

DEPARTURE PROCEDURE: **Rwy 30**, northbound departures climb runway heading to 2000 before turning.

EVELETH, MN

EVELETH-VIRGINIA MUNI (EVM)

AMDT 2 94118 (FAA)

TAKE-OFF MINIMUMS: **Rwy 32**, 800-2 or std. with a min. climb to 330' per NM to 2300.

DEPARTURE PROCEDURE: **Rwy 27**, northwest departures (270°-050°) climb runway heading to 2200 before turning.

FAIRMONT, MN

FAIRMONT MUNI (FRM)

AMDT 3 09127 (FAA)

NOTE: **Rwy 2**, trees beginning 2466' from DER, 1105' right of centerline, up to 100' AGL/1269' MSL. **Rwy 13**, tree 2340' from DER, 1039' left of centerline, 100' AGL/1269' MSL. **Rwy 20**, trees beginning 1640' from DER, 914' right of centerline, up to 100' AGL/1289' MSL. Trees beginning 913' from DER, 449' left of centerline, up to 100' AGL/1299' MSL. **Rwy 31**, trees beginning 954' from DER, 161' left of centerline, up to 100' AGL/1299' MSL. Trees and road beginning 791' from DER, 339' right of centerline, up to 57' AGL/1226' MSL.

FARGO, ND

HECTOR INTL (FAR)

AMDT 4 04330 (FAA)

TAKE-OFF MINIMUMS: **Rwys 13, 31**, NA.

NOTE: **Rwy 9**, multiple light poles 1124' from departure end of runway, 305' left of centerline, 20' AGL/927' MSL.

FERGUS FALLS, MN

FERGUS FALLS MUNI-EINAR MICKELSON FIELD (FFM)

ORIG 09239 (FAA)

NOTE: **Rwy 13**, trees beginning 2612' from DER, 128' right of centerline, up to 100' AGL/1269' MSL. Trees beginning 2514' from DER, 42' left of centerline, up to 100' AGL/1259' MSL. **Rwy 17**, trees beginning 1100' from DER 663' right of centerline, up to 100' AGL/1269' MSL. Road 222' from DER, 469' right of centerline, 15' AGL/1173' MSL. **Rwy 35**, trees beginning 2156' from DER, 176' right of centerline, up to 100' AGL/1289' MSL.

FOSSTON, MN

FOSSTON MUNI (FSE)

AMDT 1 87351 (FAA)

TAKE-OFF MINIMUMS: **Rwys 14, 32**, IFR takeoff not authorized.

DEPARTURE PROCEDURE: **Rwy 16**, climb runway heading to 2000 before turning.

GETTYSBURG, SD

GETTYSBURG MUNI (0D8)

AMDT 1 07018 (FAA)

NOTE: **Rwy 4**, multiple trees beginning 1011' from departure end of runway, 420' left of centerline, up to 60' AGL/2119' MSL. **Rwy 13**, multiple trees beginning 1897' from departure end of runway, 975' left of centerline, 60' AGL/2119' MSL. **Rwy 22**, multiple trees beginning 679' from departure end of runway, 117' left of centerline, up to 60' AGL/2109' MSL.

GLENCOE, MN

GLENCOE MUNI (GYL)

ORIG 09071 (FAA)

NOTE: **Rwy 13**, trees beginning 349' from DER, 257' right of centerline, up to 100' AGL/1099' MSL. Trees beginning 1211' from DER, 314' left of centerline, up to 100' AGL/1109' MSL. Terrain beginning 53' from DER, 166' left of centerline, up to 998' MSL. Terrain beginning 286' from DER, 435' right of centerline, up to 1001' MSL. **Rwy 31**, trees beginning 501' from DER, 530' right of centerline, up to 100' AGL/1099' MSL. Tree 2577' from DER, 129' left of centerline, 100' AGL/1109' MSL.

GLENWOOD, MN

GLENWOOD MUNI (GHW)

AMDT 2 98337 (FAA)

TAKE-OFF MINIMUMS: **Rwy 5**, 1200-2 or std. with a min. climb of 220' per NM to 2900.

GRAFTON, ND

HUTSON FIELD (GAF)

ORIG 97086 (FAA)

TAKE-OFF MINIMUMS: **Rwy 35**, 400-2 or std. with a min. climb of 420' per NM to 1300.

GRANDFORKS, ND

GRAND FORKS INTL (GFK)

AMDT 2 09071 (FAA)

NOTE: **Rwy 9L**, tree 127' from DER, 451' left of centerline, 12' AGL/853' MSL. **Rwy 27R**, bush 38' from DER, 474' right of centerline, 5' AGL/844' MSL. **Rwy 35L**, obstruction light on DME 645' from DER, 198' left of centerline, 21' AGL/860' MSL. **Rwy 35R**, tree 1259' from DER, 521' right of centerline, 41' AGL/880' MSL. Tree 1655' from DER, 271' left of centerline, 45' AGL/884' MSL.

GRANT MARAIS, MN

GRANT MARAIS/COOK COUNTY (CKC)

ORIG 09015 (FAA)

NOTE: **Rwy 9**, trees beginning 58' from departure end of runway, 168' right of centerline up to 54' AGL/1833' MSL. Bushes 112' from departure end of runway, 142' left of centerline, 11' AGL/1805' MSL. Tree 464' from departure end of runway, 75' left of centerline, 14' AGL/1813' MSL. **Rwy 27**, trees beginning 85' from departure end of runway, 187' left of centerline, up to 59' AGL/1858' MSL. Trees beginning 282' from departure end of runway, 115' right of centerline, up to 42' AGL/1861' MSL.

GRAND RAPIDS, MN

GRAND RAPIDS/ITASCA COUNTY-GORDON
NEWSTROM FIELD (GPZ)

AMDT 4 09127 (FAA)

TAKE-OFF MINIMUMS: **Rwys 5, 10, 23, 28**, NA-
Environmental.

NOTE: **Rwy 16**, tree 1655' from DER, 899' left of
centerline, 51' AGL/1410' MSL. Tree 3236' from DER,
1130' right of centerline, 82' AGL/1441' MSL. **Rwy 34**,
tree 3416' from DER, 1253' right of centerline, 100'
AGL/1399' MSL.

GREGORY, SD

GREGORY MUNI, FLYNN FIELD (9D1)

ORIG 97142 (FAA)

TAKE-OFF MINIMUMS: **Rwy 31**, 400-2 or std. with a
min. climb of 210' per NM to 2600.

GWINNER, ND

GWINNER-ROGER MELROE FIELD (GWR)

ORIG 09183 (FAA)

TAKE-OFF MINIMUMS: **Rwys 6, 24**, NA-Environment.
Rwy 34, Std. w/ min. climb of 216' per NM to 2000, or
900-2½ for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwy 34**, for climb in
visual conditions, cross Gwinner-Roger Melroe Field at
or above 2000, before proceeding on course.

NOTE: **Rwy 16**, terrain beginning 15' from DER, 73'
right of centerline, 1257' MSL. **Rwy 34**, road and vehicle
436' from DER, on centerline, 15' AGL/1286' MSL.

HAWLEY, MN

HAWLEY MUNI (04Y)

ORIG 07074 (FAA)

NOTE: **Rwy 34**, road 15' from departure end of runway,
421' left of centerline, 15' AGL/1224' MSL.

HETTINGER, ND

HETTINGER MUNI (HEI)

AMDT 1 98225 (FAA)

TAKE-OFF MINIMUMS: **Rwy 12**, 300-1 or std. with a
min. climb rate of 220' per NM to 3000. **Rwys 17, 35** NA.

HIBBING, MN

CHISHOLM-HIBBING (HIB)

AMDT 6 04218 (FAA)

DEPARTURE PROCEDURE: **Rwy 22**, climb via heading
227° to 2200 before turning right. **Rwy 31**, climb via
heading 310° to 2200 before turning left.

NOTE: **Rwy 4**, antenna on pole, 361' from departure end
of runway, 409' right of centerline, 1377' MSL. **Rwy 13**,
obstacle light on pole, 1184' from departure end of
runway, 636' left of centerline. Numerous trees
beginning 1291' from departure end of runway, 745' left
of centerline up to 1419' MSL. Trees 1497' from
departure end of runway, 563' right of centerline, 1388'
MSL. **Rwy 22**, multiple trees beginning 368' from
departure end of runway, 170' right of centerline, up to
1416' MSL. Multiple trees beginning 413' from
departure end of runway, 117' left of centerline, up to
1400' MSL. **Rwy 31**, light standard, 865' from departure
end of runway, 595' right of centerline, 1381' MSL.

HILLSBORO, ND

HILLSBORO MUNI (3H4)

ORIG 97198 (FAA)

DEPARTURE PROCEDURE: **Rwys 16, 34**, climb runway
heading to 2000 prior to turning westbound.

HINCKLEY, MN

FIELD OF DREAMS (04W)

ORIG 08045 (FAA)

NOTE: **Rwy 6**, Tree 82' from departure end of runway,
480' right of centerline, 100' AGL/1114' MSL. Tree 143'
from departure end of runway, 161' left of centerline, 100'
AGL/1114' MSL. **Rwy 24**, Tree 48' from departure end of
runway, 165' left of centerline, 100' AGL/1124' MSL.

HOT SPRINGS, SD

HOT SPRINGS MUNI (HSR)

ORIG 97142 (FAA)

TAKE-OFF MINIMUMS: **Rwy 1**, 300-1 or std. with a min.
climb of 360' per NM to 5000. **Rwy 19**, 300-2 or std. with
a min. climb of 250' per NM to 5000.

DEPARTURE PROCEDURE: **Rwys 1, 19**, climb runway
heading to 5000 before proceeding westbound.

HURON, SD

HURON RGNL (HON)

AMDT 5 09239 (FAA)

NOTE: **Rwy 12**, trees and pole beginning 918' from DER,
525' left of centerline, up to 62' AGL/1341' MSL. Trees
beginning 291' from DER, 234' right of centerline, up to
100' AGL/1389' MSL. **Rwy 17**, trees beginning 236'
from DER, 307' left of centerline, up to 67' AGL/1346'
MSL. Trees beginning 264' from DER, 262' right of
centerline, 73' AGL/1352' MSL. **Rwy 30**, trees
beginning 3428' from DER, 1378' left of centerline, up to
100' AGL/1394' MSL. **Rwy 35**, trees beginning 60' from
DER, 104' left of centerline, up to 49' AGL/1328' MSL.
Trees beginning 251' from DER, 97' right of centerline,
52' AGL/1331' MSL.

INTERNATIONAL FALLS, MN

FALLS INTL (INL)

AMDT 3 08101 (FAA)

NOTE: **Rwy 4**, Tree 392' from departure end of runway
311' left of centerline, 51' AGL/1231' MSL. **Rwy 13**,
multiple trees beginning 1999' from departure end of
runway, 773' left of centerline, up to 63' AGL/1233' MSL.
Pole 1091', from departure end of runway, 703' right of
centerline, 37' AGL/1207' MSL. Road 1005' from
departure end of runway, 766' left of centerline, 15' AGL/
1195' MSL. **Rwy 22**, Multiple trees beginning 433' from
departure end of runway 273' left of centerline, up to 33'
AGL/1213' MSL. Trees 1144' from departure end of
runway 136' right of centerline, 28' AGL/1208' MSL.
Rwy 31, Trees 968' from departure end of runway, 752'
left of centerline, 56' AGL/1236' MSL.

09351

JACKSON, MN

JACKSON MUNI (MJQ)

ORIG 08045 (FAA)

TAKE-OFF MINIMUMS: **Rwys 4,22**, NA-TURF.

DEPARTURE PROCEDURE: **Rwy 13**, Climb heading 134° to 1900 before turning right.

NOTES: **Rwy 13**, Trees beginning 1474' from departure end of runway, 556' left of centerline, up to 80' AGL/1539' MSL. Vehicle on road 258' from departure end of runway, 559' from centerline, 15' AGL/1459' MSL. **Rwy 31**, Vehicle on road 465' from departure end of runway, 618' left of centerline, 15' AGL/1446' MSL. Trees beginning 1616' from departure end of runway, 580' right of centerline, up to 80' AGL/1519' MSL. Trees beginning 1110' from departure end of runway, 429' left of centerline, up to 80' AGL/1509' MSL.

JAMESTOWN, ND

JAMESTOWN RGNL (JMS)

AMDT 1 07242 (FAA)

NOTE: **Rwy 22**, antenna and tank beginning 2960' from departure end of runway, 1007' left of centerline, up to 150' AGL/1631' MSL. **Rwy 31**, multiple trees beginning 2129' from departure end of runway 47' right of centerline, up to 60' AGL/1560' MSL.

LITCHFIELD, MN

LITCHFIELD MUNI (LJF)

DEPARTURE PROCEDURE: **Rwys 13, 31**, climb to 1800 on runway heading before proceeding on course.

LITTLE FALLS, MN

LITTLE FALLS/MORRISON COUNTY

CHARLES A. LINDBERGH FIELD (LXL)

AMDT 3 96172 (FAA)

TAKE-OFF MINIMUMS: **Rwy 13**, 300-1 or std. with a min. climb of 250' per NM to 1500. **Rwy 36**, 600-1½ or std. with a min. climb of 345' per NM to 1700.

DEPARTURE PROCEDURE: **Rwy 31**, climb to 1700 before turning.

LONG PRAIRIE, MN

TODD FIELD (14Y)

ORIG 08157 (FAA)

NOTE: **Rwy 16**, tree 273' from departure end of runway, 310' right of centerline, 100' AGL/1436' MSL. **Rwy 34**, tree 70' from departure end of runway, 100' right of centerline, 100' AGL/1439' MSL. Tree 122' from departure end of runway, 105' left of centerline, 100' AGL/1436' MSL. Tree 18' from departure end of runway, 106' right of centerline, 100' AGL/1433' MSL.

MANKATO, MN

MANKATO RGNL (MKT)

ORIG 09267 (FAA)

NOTE: **Rwy 4**, trees beginning 447' from DER, 408' right of centerline, up to 100' AGL/1078' MSL. Trees beginning 1996' from DER, 17' left of centerline, up to 100' AGL/1084' MSL. **Rwy 15**, trees beginning 1552' from DER, 719' left of centerline, up to 100' AGL/1088' MSL. **Rwy 22**, trees beginning 2370' from DER, 989' right of centerline, up to 100' AGL/1069' MSL. **Rwy 33**, trees beginning 2085' from DER, 780' right of centerline, up to 100' AGL/1077' MSL. Rising terrain 9' from DER, 65' right of centerline, up to 1029' MSL. Terrain beginning 82' from DER, 60' left of centerline, up to 1029' MSL.

MARSHALL, MN

SOUTHWEST MINNESOTA RGNL MARSHALL/

RYAN FIELD (MML)

AMDT 2 08101 (FAA)

TAKE-OFF MINIMUMS: **Rwy 20**, Std. w/ min. climb of 270' per NM to 2000, or 1000-3 for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwy 20**, for climb in visual conditions, cross Marshall Airport at or above 2000 MSL before proceeding on course.

NOTE: **Rwy 12**, Pole 706' from departure end of runway, 671' right of centerline, 60' AGL/1212' MSL, pole 1580' from departure end of runway, 732' left of centerline, 70' AGL/1225' MSL, antenna 1496' from departure end of runway, 620' right of centerline, 64' AGL/1219' MSL, pole 1185' from departure end of runway, 540' right of centerline, 55' AGL/1210' MSL, tree 3564' from departure end of runway, 400' right of centerline, 110' AGL/1269' MSL, tree 2135' from departure end of runway, 113' left of centerline, 77' AGL/1232' MSL. **Rwy 30**, Vehicle on road 1' from departure end of runway, 435' left of centerline, 24' AGL/1200' MSL.

MILBANK, SD

MILBANK MUNI (1D1)

ORIG 08101 (FAA)

TAKE-OFF MINIMUMS: **Rwy 25**, Std. w/ a min. climb of 207' per NM to 1900, or 900-2½ for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwy 25**, For climb in visual conditions cross Milbank Muni airport at or above 1900 before proceeding on course.

NOTE: **Rwy 7**, trees beginning 1207' from departure end of runway, 387' left of centerline, up to 100' AGL/1219' MSL. Vehicle on road 829' from departure end of runway, 373' right of centerline, 15' AGL/1134' MSL. Building 322' from departure end of runway, 582' right of centerline, 25' AGL/1134' MSL. **Rwy 13**, trees beginning 1448' from departure end of runway, 394' right of centerline, up to 100' AGL/1219' MSL. Vehicle on road 218' from departure end of runway, 490' left of centerline, 15' AGL/1134' MSL. Building 78' from departure end of runway, 397' left of centerline, 25' AGL/1134' MSL. **Rwy 25**, tree 3584' from departure end of runway, 477' left of centerline, 100' AGL/1249' MSL.

Rwy 31, tree 2992' from departure end of runway, 715' left of centerline, 100' AGL/1239' MSL.

MILLER, SD

MILLER MUNI (MKA)

ORIG 08269 (FAA)

NOTE: **Rwy 15**, vehicle on road 769' from departure end of runway, 642' right of centerline, 15' AGL/1599' MSL. Snow removal equipment 206' from departure end of runway, 475' right of centerline, 21' AGL/1594' MSL. Tree 3903' from departure end of runway, 998' left of centerline, 100' AGL/1684' MSL. **Rwy 33**, vehicle on road 450' from departure end of runway, 560' left of centerline, 15' AGL/1584' MSL. Tree 762' from departure end of runway, 628' left of centerline, 100' AGL/1669' MSL.

09351

MINNEAPOLIS, MN

ANOKA COUNTY-BLAINE AIRPORT
(JANES FIELD) (ANE)

AMDT 4 07018 (FAA)

DEPARTURE PROCEDURE: **Rwy 9**, climb heading 089° to 2600 before turning right. **Rwy 18**, climb heading 179° to 2600 before turning left. **Rwy 27**, climb heading 269° to 1800 before proceeding southeast bound. **Rwy 36**, climb heading 359° to 1800 before proceeding southeast bound.

NOTE: **Rwy 9**, multiple trees 821' from departure end of runway, 619' right of centerline, up to 51' AGL/961' MSL. Tank 1.1 NM from departure end of runway, 1280' right of centerline, 170' AGL/1082' MSL. **Rwy 27**, multiple trees 559' from departure end of runway, 404' left of centerline, up to 50' AGL/946' MSL. Multiple trees 480' from departure end of runway, 394' right of centerline, up to 26' AGL/922' MSL. **Rwy 36**, multiple trees 191' from departure end of runway, 495' right of centerline, up to 78' AGL/971' MSL. Multiple trees 1458' from departure end of runway, 53' left of centerline, up to 59' AGL/958' MSL.

CRYSTAL (MIC)

AMDT 2 81050 (FAA)

TAKE-OFF MINIMUMS: **Rwys 14L, 14R, 32L, 32R**, 300-1. **Rwys 24L, 24R**, 300-1 or std. with a min. climb of 215' per NM to 1000. **Rwys 6L, 6R**, 300-1 or std. with a min. climb of 285' per NM to 1000.

DEPARTURE PROCEDURE: **Rwys 6L, 6R, 14L, 14R**, eastbound departures (050°-130°) climb runway heading to 2800 before turning.

FLYING CLOUD (FCM)

AMDT 4 08157 (FAA)

NOTE: **Rwy 10L**, multiple antenna's on hangar's beginning 270' from departure end of runway, 330' left of centerline, up to 26' AGL/932' MSL. Tree 682' from departure end of runway, 668' right of centerline, 26' AGL/932' MSL. **Rwy 10R**, multiple obstruction light on poles beginning 287' from departure end of runway, 345' right of centerline, up to 36' AGL/939' MSL. Hangar 150' from departure end of runway, 422' right of centerline, 21' AGL/920' MSL. Antenna on building, 536' from departure end of runway, 263' right of centerline, 14' AGL/913' MSL. **Rwy 18**, multiple trees beginning 338' from departure end of runway, 166' left of centerline, up to 62' AGL/961' MSL. Obstruction light on fence 176' from departure end of runway, 127' left of centerline, 10' AGL/910' MSL. Vehicle and road 198' from departure end of runway, 196' left of centerline, 15' AGL/918' MSL. Floodlight 148' from departure end of runway, 374' right of centerline, 38' AGL/938' MSL. Obstruction light on hangar 282' from departure end of runway, 317' right of centerline, 37' AGL/937' MSL. **Rwy 28R**, Hangar 259' from departure end of runway, 355' right of centerline, 18' AGL/931' MSL. **Rwy 36**, wind vane 923' from departure end of runway, 404' left of centerline, 61' AGL/960' MSL. Vent on building 943' from departure end of runway, 295' left of centerline, 44' AGL/943' MSL. Pole 714' from departure end of runway, 351' left of centerline, 33' AGL/932' MSL. Multiple trees beginning 504' from departure end of runway, 324' right of centerline, up to 67' AGL/966' MSL.

MINNEAPOLIS-ST. PAUL INTL
(WOLD CHAMBERLAIN) (MSP)

AMDT 11 07130 (FAA)

TAKEOFF MINIMUMS: **Rwy 35**, std. with a min. climb of 219' per NM to 2100.

DEPARTURE PROCEDURE: **Rwy 4**, climb heading 043° to 2100 before turning left. **Rwy 30L**, climb heading 299° to 2100 before turning right. **Rwy 30R**, climb heading 299° to 2100 before turning right. **Rwy 35**, climb via heading 348° to 2100 before turning left.

NOTE: **Rwy 4**, multiple trees beginning 800' from departure end of runway, 264' left of centerline, up to 75' AGL/921' MSL. Rod on building 2528' from departure end of runway, 1175' left of centerline, 78' AGL/922' MSL. Fence 803' from departure end of runway, 585' left of centerline, 15' AGL/860' MSL. Antenna on OL building 456' from departure end of runway, 319' left of centerline, 13' AGL/850' MSL. Light poles 1932' from departure end of runway, 718' left of centerline, 45' AGL/885' MSL. Stack 4535' from departure end of runway, 481' left of centerline, 139' AGL/949' MSL. **Rwy 12R**, multiple trees beginning 1477' from departure end of runway, 407' left of centerline, up to 86' AGL/851' MSL. Multiple trees beginning 1426' from departure end of runway, 124' right of centerline, up to 111' AGL/847' MSL. Light pole 1408' from departure end of runway, 746' right of centerline, 85' AGL/843' MSL. Radar RFLTR 983' from departure end of runway, 32' left of centerline, 15' AGL/829' MSL. Pipe on building, 826' from departure end of runway, 576' left of centerline, 10' AGL/825' MSL. Obstruction light on localizer 766' from departure end of runway, on centerline, 7' AGL/821' MSL. **Rwy 17**, antenna 1272' from departure end of runway, 562' right of centerline, 57' AGL/891' MSL. Pole 409' from departure end of runway, 530' right of centerline, 29' AGL/866' MSL. WDI on building 2619' from departure end of runway, 881' left of centerline, 97' AGL/918' MSL. Building 2619' from departure end of runway, 859' left of centerline, 84' AGL/905' MSL. Light 1176' from departure end of runway, 291' right of centerline, 11' AGL/875' MSL. Tree 2619' from departure end of runway, on centerline, 79' AGL/900' MSL. **Rwy 22**, tree 2906' from departure end of runway, 833' right of centerline, 94' AGL/934' MSL. Hopper 1717' from departure end of runway, 456' left of centerline, 48' AGL/888' MSL. **Rwy 30L**, multiple trees beginning 1113' from departure end of runway, 701' left of centerline, up to 80' AGL/919' MSL. Tree 1230' from departure end of runway, 633' right of centerline, 30' AGL/877' MSL. Ground 28' from departure end of runway, 490' right of centerline, 0' AGL/844' MSL. **Rwy 30R**, building 1056' from departure end of runway, 198' left of centerline, 13' AGL/853' MSL. Multiple trees beginning 3010' from departure end of runway, 334' left of centerline, up to 94' AGL/940' MSL. Light pole 1849' from departure end of runway, 698' right of centerline, 17' AGL/871' MSL. Fence 1327' from departure end of runway, 667' right of centerline, 8' AGL/857' MSL. Tree 3703' from departure end of runway, 350' right of centerline, 67' AGL/914' MSL. Rod on pole 3143' from departure end of runway, 47' right of centerline, 38' AGL/898' MSL. **Rwy 35**, tree 175' from departure end of runway, 398' right of centerline, 73' AGL/883' MSL. Multiple trees beginning 1989' from departure end of runway, 351' left of centerline, up to 65' AGL/902' MSL. Multiple buildings beginning 5.45 NM from departure end of runway, 1787' left of centerline, up to 811' AGL/1743' MSL.



TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

09351

MINOT, ND

MINOT INTL (MOT)

AMDT 3 06103 (FAA)

TAKE-OFF MINIMUMS: **Rwy 26**, 300-1½ or std. with a min. climb of 219' per NM to 2000.

DEPARTURE PROCEDURE: **Rwy 13**, climb via heading 128° to 2200 before turning right. **Rwy 26**, climb via heading 260° to 2300 before turning left.

NOTE: **Rwy 8**, tree 1801' from departure end of runway, 292' left of centerline, 56' AGL/1714' MSL. Tree 1459' from departure end of runway, 528' left of centerline, 47' AGL/1705' MSL. **Rwy 26**, tree 1750' from departure end of runway, 618' right of centerline, 71' AGL/1786' MSL. Tree 1829' from departure end of runway, 376' left of centerline, 65' AGL/1780' MSL. Light pole 1110' from departure end of runway, 610' left of centerline, 44' AGL/1759' MSL. Tank 1.1 NM from departure end of runway, 1810' right of centerline, 184' AGL/1899' MSL. Tree 1782' from departure end of runway, 273' right of centerline, 49' AGL/1764' MSL. Light pole 1294' from departure end of runway, 452' right of centerline, 29' AGL/1751' MSL. Tree 2019' from departure end of runway, 393' right of centerline, 54' AGL/1769' MSL. Building 1431' from departure end of runway, 301' right of centerline, 38' AGL/1753' MSL. Light pole 1418' from departure end of runway, 23' right of centerline, 36' AGL/1751' MSL.

MITCHELL, SD

MITCHELL MUNI (MHE)

AMDT 1 86240 (FAA)

DEPARTURE PROCEDURE: **Rwys 12, 17**, climb to 1800 before turning.

MOBRIDGE, SD

MOBRIDGE MUNI (MBG)

ORIG 88154 (FAA)

TAKE-OFF MINIMUMS: **Rwy 35**, 300-1.

DEPARTURE PROCEDURE: **Rwys 12, 17, 30, 35**, climb runway heading to 2500 before turning on course.

MONTEVIDEO, MN

MONTEVIDEO-CHIPPEWA COUNTY (MVE)

TAKE-OFF MINIMUMS: **Rwy 21**, 400-1½.

DEPARTURE PROCEDURE: **Rwy 14**, climb runway heading to 1500 before turning.

MOOSE LAKE, MN

MOOSE LAKE CARLTON COUNTY (MZH)

ORIG 94006 (FAA)

TAKE-OFF MINIMUMS: **Rwys 4, 22**, 300-1.

MORRIS, MN

MORRIS MUNI-CHARLIE SCHMIDT FLD (MOX)

ORIG 08045 (FAA)

TAKE-OFF MINIMUMS: **Rwys 4, 22**, NA-Environmental.

NOTE: **Rwy 32**, Trees 2888' from departure end of runway, 1125' left of centerline, 100' AGL/1209' MSL.

OAKES, ND

OAKES MUNI (2D5)

ORIG 97142 (FAA)

TAKE-OFF MINIMUMS: **Rwy 30**, 300-1 or std. with a min. climb of 260' per NM to 1700.

OLIVIA, MN

OLIVIA RGNL (OVL)

AMDT 1 86044 (FAA)

TAKE-OFF MINIMUMS: **Rwy 11**, 300-1.

ORR, MN

ORR RGNL (ORB)

AMDT 1 80136 (FAA)

TAKE-OFF MINIMUMS: **Rwy 13**, 500-2 or std. with a min. climb of 260' per NM to 1900.

ORTONVILLE, MN

ORTONVILLE MUNI-MARTINSON FIELD (VVV)

ORIG 81274 (FAA)

TAKE-OFF MINIMUMS: **Rwy 16**, 300-1 or std. with a min. climb of 210' per NM to 1300.

OWATONNA, MN

OWATONNA DEGNER RGNL (OWA)

AMDT 2 97030 (FAA)

DEPARTURE PROCEDURE: **Rwy 12**, climb runway heading to 1500 before turning on course.

PEMBINA, ND

PEMBINA MUNI (PMB)

ORIG 85325 (FAA)

DEPARTURE PROCEDURE: **Rwy 33**, climb runway heading 3200 before turning left.

PERHAM, MN

PERHAM MUNI (16D)

ORIG 98113 (FAA)

TAKE-OFF MINIMUMS: **Rwy 12**, 500-2 or std. with a min. climb of 210' per NM to 2000. **Rwy 30**, 400-1 or std. with a min. climb of 270' per NM to 1800.

DEPARTURE PROCEDURE: **Rwy 12**, climb runway heading to 2000 before proceeding on course.

Rwy 30, climb runway heading to 1800 before proceeding on course.

PIERRE, SD

PIERRE RGNL (PIR)

AMDT 2 85115 (FAA)

TAKE-OFF MINIMUMS: **Rwy 25**, 300-1.

PINE RIDGE, SD

PINE RIDGE (IEN)

ORIG 97226 (FAA)

TAKE-OFF MINIMUMS: **Rwy 12**, 300-1 or std. with a min. climb of 350' per NM to 3600. **Rwy 24**, 300-1 or std. with a min. climb of 220' per NM to 3500. **Rwy 30**, 300-1 or std. with a min. climb of 300' per NM to 3600.



TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

09351

PIPESTONE, MN

PIPESTONE MUNI (PQN)

ORIG 08045 (FAA)

TAKE-OFF MINIMUMS: **Rwys 9,27**, NA-Environmental.

NOTE: **Rwy 18**, Trees beginning 381' from departure end of runway, 854' right of centerline, up to 100' AGL/1859' MSL.

PRESTON, MN

FILLMORE COUNTY (FKA)

ORIG 98113 (FAA)

TAKE-OFF MINIMUMS: **Rwys 11,29**, 300-1.

PRINCETON, MN

PRINCETON MUNI (PNM)

AMDT 1 05132 (FAA)

NOTE: **Rwy 15**, trees 982' from departure end of runway, 335' right of centerline, 50' AGL/1029' MSL. Trees 1449' from departure end of runway, 387' left of centerline, 50' AGL/1029' MSL. **Rwy 33**, barn 1159' from departure end of runway, 780' right of centerline, 50' AGL/1139' MSL, multiple trees, terrain, and road beginning 36' from departure end of runway, 84' right of centerline, up to 50' AGL/1045' MSL.

RAPID CITY, SD

RAPID CITY RGNL (RAP)

AMDT 6 07130 (FAA)

DEPARTURE PROCEDURE: **Rwy 5**, climb on heading between 255° clockwise to 210° from departure end of runway, or min. climb of 240' per NM to 8800 for all other courses. **Rwy 14**, climb on heading between 325° clockwise to 210° from departure end of runway, or min. climb of 245' per NM to 8900 for all other courses. **Rwy 23**, climb on heading between 210° counter clockwise to 055° from departure end of runway, or min. climb of 268' per NM to 8900 for all other courses. **Rwy 32**, climb on heading between 255° clockwise to 140° from departure end of runway, or min. climb of 242' per NM to 8800 for all other courses.

NOTE: **Rwy 5**, fence 133' from departure end of runway, 249' left of centerline, 10' AGL/3215' MSL. **Rwy 23**, hangar 201' from departure end of runway, 299' left of centerline, 24' AGL/3193' MSL. Fence 334' from departure end of runway, 256' right of centerline, 10' AGL/3184' MSL. **Rwy 32**, obstruction light 662' from departure end of runway, 243' left of centerline, 54' AGL/3213' MSL. Fence 1002' from departure end of runway, 751' right of centerline, 10' AGL/3233' MSL. Tower 1.9 NM from departure end of runway, 3503' right of centerline, 152' AGL/3520' MSL.

RAY S. MILLER AAF (KRYM)

CAMP RIPLEY, MN AMDT 2, 09155

TAKE-OFF OBSTACLES: **Rwy 13**, Terrain 1270' MSL, 73' from DER, 8' left and right of centerline. Vehicle 15' AGL/1180' MSL, 765' from DER, 638' left of centerline. **Rwy 31**, Terrain 1273' MSL, 54' from DER, 9' left and right of centerline. Trees 64' AGL/1282' MSL, 798' from DER, 325' left and right of centerline.

RED WING, MN

RED WING RGNL (RGK)

AMDT 1 01137 (FAA)

DEPARTURE PROCEDURE: **Rwy 9**, 700-4 or std. with a min. climb of 270' per NM to 1700.

REDWOOD FALLS, MN

REDWOOD FALLS MUNI (RWF)

ORIG 09071 (FAA)

TAKE-OFF MINIMUMS: **Rwys 5,23**, NA-Environmental. NOTE: **Rwy 12**, numerous buildings beginning 388' from DER, 376' right of centerline, up to 13' AGL/1052' MSL. Numerous fences beginning 6' from DER, 329' right of centerline, up to 13' AGL/1052' MSL. Tree 62' from DER, 444' left of centerline, 11' AGL/1040' MSL. **Rwy 30**, multiple trees beginning 865' from DER, 401' right of centerline, up to 100' AGL/1119' MSL. Vehicle on road 128' from DER, 306' right of centerline, 15' AGL/1027' MSL.

ROCHESTER, MN

ROCHESTER INTL (RST)

ORIG 09015 (FAA)

NOTE: **Rwy 2**, road 73' from departure end of runway, 385' right of centerline, 10' AGL/1292' MSL. Tree 4377' from departure end of runway, 1132' right of centerline, 100' AGL/1399' MSL. Road 268' from departure end of runway, 366' right of centerline, 10' AGL/1290' MSL. **Rwy 13**, tree 1498' from departure end of runway, 840' right of centerline, 44' AGL/1348' MSL. **Rwy 20**, pole 259' from departure end of runway, 407' right of centerline, 23' AGL/1338' MSL. Roads beginning 1' from departure end of runway, 231' right of centerline, up to 10' AGL/1327' MSL. **Rwy 31**, tree 4760' from departure end of runway, 1103' left of centerline, 100' AGL/1389' MSL.

ROSEAU, MN

ROSEAU MUNI-RUDY BILLBERG FIELD (ROX)

ORIG 07242 (FAA)

NOTE: **Rwy 16**, building 258' from departure end of runway, 505' right of centerline, 24' AGL/1078' MSL. Tree 1582' from departure end of runway, 337' left of centerline, 47' AGL/1101' MSL. **Rwy 34**, truck on road 41' from departure end of runway, 511' left of centerline, 15' AGL/1069' MSL.

RUSHFORD, MN

RUSHFORD MUNI (55Y)

AMDT 1 96228 (FAA)

TAKE-OFF MINIMUMS: **Rwy 34**, 300-1 or std. with a min. climb of 300' per NM to 1500.

DEPARTURE PROCEDURE: **Rwy 16**, climb runway heading to 1700 before turning eastbound.

ST. CLOUD, MN

ST. CLOUD RGNL (STC)

ORIG 09239 (FAA)

TAKE-OFF MINIMUMS: **Rwy 5**, 300-1¼ or std. w/ min. climb of 201' per NM to 1300 or alternatively, with standard take-off minimums and a normal 200'/NM climb gradient, take-off must occur no later than 1100' prior to DER.

NOTE: **Rwy 5**, tower 6201' from DER, 1416' left of centerline, 149' AGL/1179' MSL. Multiple trees beginning 17' from DER, 373' right of centerline, up to 59' AGL/1081' MSL. Multiple trees beginning 1752' from DER, 56' left of centerline, up to 80' AGL/1102' MSL.

Rwy 13, tree 1654' from DER, 884' right of centerline, 61' AGL/1078' MSL. Tree 1265' from DER, 794' left of centerline, 42' AGL/1059' MSL. **Rwy 23**, trees 2109' from DER, 29' right of centerline, up to 61' AGL/1082' MSL. Trees 1725' from DER, 93' left of centerline, up to 55' AGL/1076' MSL. Fence 74' from DER, 216' left of centerline, 2' AGL, 1023' MSL. **Rwy 31**, terrain beginning 29' from DER, 50' right of centerline, up to 1083' MSL. Terrain beginning 107' from DER, 7' left of centerline, up to 1060' MSL.

ST. JAMES, MN

ST. JAMES MUNI (JYG)

ORIG 94342 (FAA)

DEPARTURE PROCEDURE: **Rwy 15**, climb to 1900 before turning eastbound.

ST. PAUL MN

LAKE ELMO (21D)

ORIG 80318 (FAA)

TAKE-OFF MINIMUMS: **Rwy 22**, 300-1 or std. with a min. climb of 225' per NM to 1100.

ST. PAUL DOWNTOWN HOLMAN FIELD (STP)

AMDT 7 08157 (FAA)

TAKE-OFF MINIMUMS: **Rwy 9**, std. w/ min. climb of 346' per NM to 1500. **Rwy 13**, std. w/ min. climb of 266' per NM to 1500. **Rwy 14**, std. w/ min. climb of 216' per NM to 1500. **Rwy 27**, std. w/ min. climb of 436' per NM to 1500.

Rwy 31, NA - obstacles. **Rwy 32**, std. w/ min. climb of 340' per NM to 3000.

DEPARTURE PROCEDURE: **Rwy 9**, climb heading 088° to 1500 before proceeding on course. **Rwy 13**, climb heading 125° to 1500 before proceeding on course.

Rwy 14, climb heading 143° to 1500 before proceeding on course. **Rwy 27**, climb heading 268° to 1700 before proceeding on course. **Rwy 32**, climb heading 323° to 1300 before proceeding on course.

NOTE: **Rwy 9**, multiple trees beginning 1265' from departure end of runway, 167' right of centerline, up to 75' AGL/1055' MSL. Multiple trees beginning 1.1 NM from departure end of runway, 124' left of centerline, up to 100' AGL/1099' MSL. Obstruction light tank 1571' from departure end of runway, 771' right of centerline, 50' AGL/811' MSL. Mobile crane 1163' from departure end of runway, 123' left of centerline, 50' AGL/758' MSL.

ST. PAUL DOWNTOWN HOLMAN FIELD

(STP) (CON'T)

Rwy 13, Obstruction light stack 2695' from departure end of runway, 842' right of centerline, 50' AGL/820' MSL. Tree 1563' from departure end of runway, 25' right of centerline, 61' AGL/748' MSL. Multiple trees beginning 1004' from departure end of runway, 607' left of centerline, 50' AGL/767' MSL. Tower 1,725' from departure end of runway, 930' left of centerline, 47' AGL/753' MSL. Vent on building 3029' from departure end of runway, 629' right of centerline, 10' AGL/783' MSL. Multiple bushes beginning 194' from departure end of runway 88' left of centerline, 7' AGL/712' MSL. Stack 1,879' from departure end of runway, 25' left of centerline, 51' AGL/751' MSL. **Rwy 14**, multiple trees beginning 805' from departure end of runway, 2' right of centerline, up to 112' AGL/811' MSL. Multiple trees beginning 1205' from departure end of runway, 64' left of centerline, up to 80' AGL/770' MSL. Poles 2810' from departure end of runway 715' right of centerline, 91' AGL/778' MSL. **Rwy 27**, multiple trees beginning 803' from departure end of runway, 122' left of centerline, up to 100' AGL/994' MSL. Tree 783' from departure end of runway, 105' right of centerline, 25' AGL/725' MSL. Obstruction light antenna 996' from departure end of runway, 304' right of centerline, 67' AGL/767' MSL. Light pole 1328' from departure end of runway, 222' left of centerline, 50' AGL/747' MSL. Building 2049' from departure end of runway, 837' right of centerline, 57' AGL/761' MSL. Flagpole 2333' from departure end of runway, 199' left of centerline, 78' AGL/778' MSL. Stack 1.8 NM from departure end of runway, 635' left of centerline, 569' AGL/1279' MSL.

Rwy 32, road and vehicle 211' from departure end of runway, 482' left of centerline, 17' AGL/717' MSL. Railroad beginning 369' from departure end of runway, 329' left of centerline, up to 23' AGL/727' MSL. Pipe on DME 383' from departure end of runway, 269' right of centerline, 17' AGL/722' MSL. Tree 1152' from departure end of runway, 209' left of centerline, 44' AGL/744' MSL. Tree 1685' from departure end of runway, 277' right of centerline, 75' AGL/770' MSL. Sign 5668' from departure end of runway, 1924' left of centerline, 86' AGL/874' MSL. Trees 5614' from departure end of runway, 1796' right of centerline, 100' AGL/939' MSL. Building 5779' from departure end of runway, 1733' right of centerline, 72' AGL/910' MSL. Pole 1.0 NM from departure end of runway, 1835' right of centerline, 157' AGL/973' MSL. Building 1.1 NM from departure end of runway, 2170' left of centerline, 122' AGL/886' MSL. Multiple buildings beginning 1.1 NM from departure end of runway, 378' left of centerline, up to 142' AGL/918' MSL.

SILVER BAY, MN

SILVER BAY MUNI (BFW)

ORIG 93035 (FAA)

TAKE-OFF MINIMUMS: **Rwys 7, 25**, 300-1.



TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

09351

SIoux FALLS, SD

JOE FOSS FIELD (FSD)

AMDT 7 07242 (FAA)

TAKE-OFF MINIMUMS: **Rwy 15**, 200-1 or std. w/ min. climb of 404' per NM to 1700. **Rwy 33**, 200-1½ or std. w/ min. climb of 343' per NM to 1700.

DEPARTURE PROCEDURE: **Rwy 3**, climb heading 030° to 2300 before turning eastbound. **Rwy 9**, climb heading 098° to 2000, then left turn direct FSD VORTAC. **Rwy 15**, climb heading 150° to 2000, then right turn direct FSD VORTAC. **Rwy 21**, climb heading 210° to 2200 before turning eastbound. **Rwy 27**, climb heading 278° to 2100 before turning eastbound. **Rwy 33**, climb heading 330° to 2200 before turning eastbound.

NOTE: **Rwy 9**, antenna 2238' from departure end of runway, 919' right of centerline, 87' AGL/1506' MSL. Pole 1256' from departure end of runway, 23' left of centerline, 43' AGL/1464' MSL. Windsock 331' from departure end of runway, 582' right of centerline, 14' AGL/1433' MSL. **Rwy 15**, antenna 3056' from departure end of runway, 983' left of centerline 117' AGL/1576' MSL. Multiple trees beginning 1211' from departure end of runway, 471' left of centerline, up to 38' AGL/1477' MSL. Tower 3102' from departure end of runway, 972' left of centerline, 61' AGL/1520' MSL. Trees and pole beginning 1746' from departure end of runway, 316' right of centerline, up to 87' AGL/1516' MSL. **Rwy 21**, multiple trees beginning 428' from departure end of runway, 522' right of centerline, up to 75' AGL/1497' MSL. **Rwy 27**, multiple trees beginning 2528' from departure end of runway, 1027' left of centerline, up to 100' AGL/1509' MSL. **Rwy 33**, 2 lighted radio towers 3639' from departure end of runway, 894' left of centerline, 88' AGL/1585' MSL, multiple trees beginning 5370' from departure end of runway, 891' left of centerline, up to 175' AGL/1603' MSL, pole 5724' from departure end of runway, 1701' left of centerline, 45' AGL/1594' MSL.

SPEARFISH, SD

BLACK HILLS-CLYDE ICE FIELD (SPF)

TAKE-OFF MINIMUMS: **Rwys 3, 8, 21, 35**, 700-2 (NA at night.). **Rwy 13**, 900-2 or std. with a min. climb of 300' per NM to 5400. **Rwy 17**, NA. **Rwys 26, 31**, 700-2 or std. with a min. climb of 370' per NM to 4700.

DEPARTURE PROCEDURE: **Rwys 3, 8**, turn left. Climb to 6500, intercept the 046° bearing outbound from SPF NDB. Thence... **Rwy 13**, climb runway heading to 4300, then climbing left turn to 6500 via heading 360° to intercept the 046° bearing outbound from SPF NDB. Thence... **Rwys 21, 35**, turn right. Climb to 6500 intercept the 046° bearing outbound from SPF NDB. Thence... **Rwy 26**, climbing right turn to 6500 via heading 330°, intercept the 297° bearing outbound from SPF NDB. Thence... **Rwy 31**, after take-off, intercept 297° bearing outbound from SPF NDB. Climb to 6500. Thence... THENCE... Continue climb to enroute MEA's before proceeding on course.

STAPLES, MN

STAPLES MUNI (SAZ)

AMDT 2 87211 (FAA)

TAKE-OFF MINIMUMS: **Rwy 14**, 400-2.

STURGIS, SD

STURGIS MUNI (49B)

ORIG 96284 (FAA)

DEPARTURE PROCEDURE: **Rwy 11**, climb runway heading to 6000, then direct RAP VORTAC.

Rwy 29, climb runway heading to 5000, then climbing right turn to 6000 direct RAP VORTAC.

THIEF RIVER FALLS, MN

THIEF RIVER FALLS RGNL (TVF)

ORIG 09071 (FAA)

NOTE: **Rwy 3**, trees beginning 3058' from DER, 678' right of centerline, up to 100' AGL/1229' MSL. **Rwy 13**, trees beginning 565' from DER, 372' left of centerline, up to 100' AGL/1214' MSL. Trees beginning 1337' from DER, 531' right of centerline, up to 100' AGL/1209' MSL. **Rwy 21**, trees beginning 214' from DER, 544' right of centerline, up to 100' AGL/1204' MSL. Trees beginning 2185' from DER, 33' left of centerline, up to 100' AGL/1209' MSL. **Rwy 31**, trees beginning 126' from DER, 410' right of centerline, up to 100' AGL/1214' MSL. Trees beginning 199' from DER, 413' left of centerline, up to 100' AGL/1209' MSL. Trees beginning 1204' from DER, 449' right of centerline, up to 100' AGL/1199' MSL. Trees beginning 1579' from DER, 495' left of centerline, up to 100' AGL/1214' MSL.

TIOGA, ND

TIOGA MUNI (D60)

ORIG 09239 (FAA)

TAKE-OFF MINIMUMS: **Rwys 3, 21**, NA- Environmental.

NOTE: **Rwy 12**, vehicle on road 1243' from DER, 78' left of centerline, 15' AGL/2304' MSL. Vehicle on road, tree and pole beginning 618' from DER, 50' right of centerline, up to 100' AGL/2419' MSL. Ground 21' from DER, 481' right of centerline, 2272' MSL. **Rwy 30**, vehicle on road 1' from DER, 144' left of centerline, 15' AGL/2256' MSL.

TOWER, MN

TOWER MUNI (12D)

ORIG 09127 (FAA)

TAKE-OFF MINIMUMS: **Rwy 8**, NA - Obstacles.

NOTE: **Rwy 26**, tree 2315' from DER, 700' right of centerline, 100' AGL/1479' MSL.

VERMILLION, SD

HAROLD DAVIDSON FIELD (VMR)

AMDT 1 09239 (FAA)

NOTE: **Rwy 12**, road 1' from DER, 200' right of centerline, up to 15' AGL/1156' MSL. Multiple trees beginning 541' from DER, 366' right of centerline, up to 62' AGL/1202' MSL. **Rwy 30**, road 79' from DER 342' left of centerline 15' AGL/1155' MSL. Road 200' from DER, 450' right of centerline, 15' AGL/1160' MSL. Fence 199' from DER, 347' left of centerline, 6' AGL/1150' MSL.

WAHPETON, ND

HARRY STERN (BWP)

ORIG 93259 (FAA)

TAKE-OFF MINIMUMS: **Rwy 3**, 300-1.

**WARREN, MN**

WARREN MUNI (D37)

ORIG 02108 (FAA)

DEPARTURE PROCEDURE: **Rwy 30**, climb
runway heading to 1400 before turning on course.**WARROAD, MN**

WARROAD INTL MEMORIAL (RRT)

ORIG 08101 (FAA)

TAKE-OFF MINIMUMS: **Rwys 4, 22**, NA-
Environmental.**WASECA, MN**

WASECA MUNI (ACQ)

ORIG 09015 (FAA)

NOTE: **Rwy 15**, tree 560' from departure end of
runway, 560' right of centerline, 100' AGL/1239'
MSL. Terrain beginning 172' from departure end of
runway, on centerline, up to 1149' MSL. **Rwy 33**,
tree 5042' from departure end of runway, 1533' right
of centerline, 100' AGL/1259' MSL.**WATERTOWN, SD**

WATERTOWN RGNL (ATY)

ORIG 07242 (FAA)

NOTE: **Rwy 12**, tree 2015' from departure end of
runway, 328' right of centerline, 100' AGL/1783'
MSL. **Rwy 30**, trees 2149' from departure end of
runway, 10' right of centerline, 51' AGL/1810' MSL.
Tree 2200' from departure end of runway, 441' left of
centerline, 70' AGL/1810' MSL. Tree 2082' from
departure end of runway, 121' right of centerline, 55'
AGL/1806' MSL.**WATFORD CITY, ND**

WATFORD CITY MUNI (S25)

ORIG 98225 (FAA)

TAKE-OFF MINIMUMS: **Rwy 30**, 400-1 or std. with
a min. climb of 340' per NM to 2600. **Rwy 12**, 300-1
or std. with a min climb of 300' per NM to 2600.**WHEATON, MN**

WHEATON MUNI (ETH)

AMDT 1 92177 (FAA)

TAKE-OFF MINIMUMS: **Rwy 16**, 300-1. **Rwys 4**,
22, NA.**WILLISTON, ND**

SLOULIN FIELD INTL (ISN)

AMDT 3 00251 (FAA)

TAKE-OFF MINIMUMS: **Rwy 29**, 300-1 or std. with a
min. climb of 270' per NM to 2300.DEPARTURE PROCEDURE: **Rwy 20**, climb runway
heading to 2300 before turning westbound.**WILLMAR, MN**

WILLMAR MUNI-JOHN L. RICE FIELD

(BDH)

ORIG 06327 (FAA)

NOTE: **Rwy 31**, tree 1338' from departure end of
runway, 740' left of centerline, 67' AGL/1193'
MSL.**WINNER, SD**

WINNER RGNL (ICR)

AMDT 3 09127 (FAA)

TAKE-OFF MINIMUMS: **Rwys 3, 21**, NA-
Environmental.**WINONA, MN**

WINONA MUNI-MAX CONRAD FIELD

(ONA)

AMDT 3 96228 (FAA)

TAKE-OFF MINIMUMS: **Rwy 12**, 300-1 or std.
with a min. climb of 320' per NM to 800. **Rwy 17**,
600-1 or std. with a min. climb of 500' per NM to
1300. **Rwy 30**, 500-1 or std. with a min. climb of
500' per NM to 1200. **Rwy 35**, 700-1 or std. with
a min. climb of 390' per NM to 1500.DEPARTURE PROCEDURE: **Rwy 12**, climb to
1900 via ONA R-110 before turning. **Rwys 17**,
30, 35, climb runway heading to 1900 before
turning.**WORTHINGTON, MN**

WORTHINGTON MUNI (OTG)

AMDT 2 88154 (FAA)

TAKE-OFF MINIMUMS: **Rwy 17**, 300-1.
DEPARTURE PROCEDURE: **Rwys 11, 17, 29**,
35, when weather is below 800-1 climb runway
heading to 2400 before turning.**YANKTON, SD**

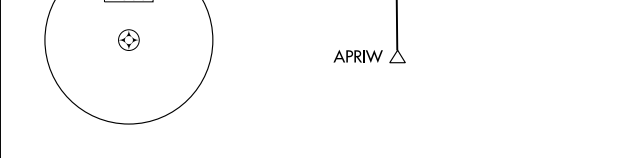
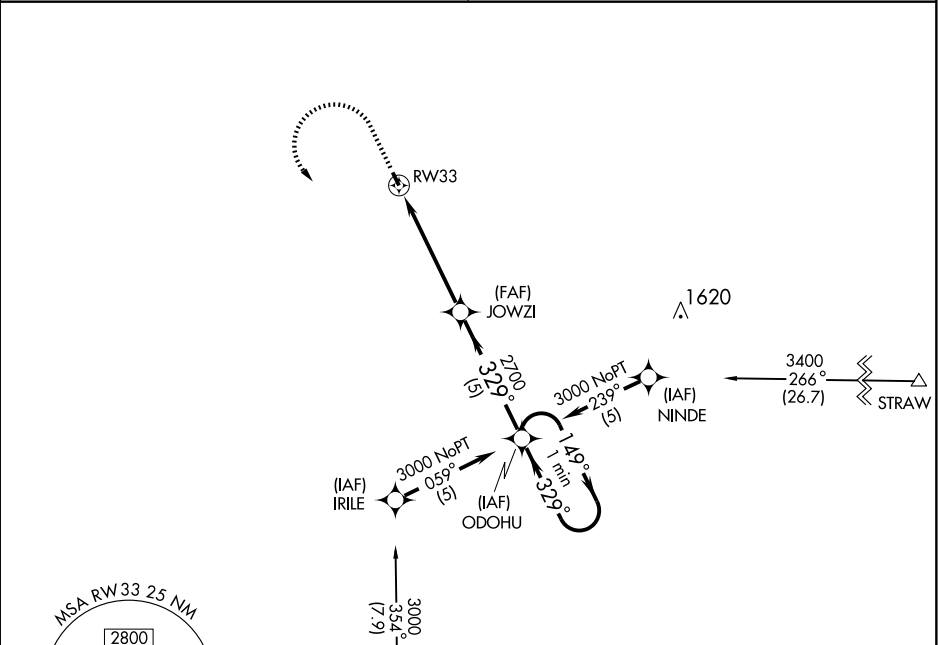
CHAN GURNEY MUNI (YKN)

AMDT 2 85003 (FAA)

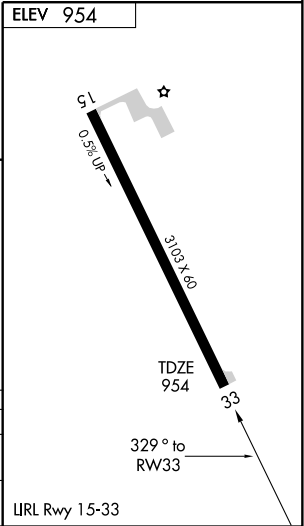
TAKE-OFF MINIMUMS: **Rwy 31**, 300-1.
DEPARTURE PROCEDURE: **Rwys 1, 13, 19**,
31, climb runway heading to 2400 before
turning.

APP CRS 329°	Rwy Idg TDZE Apt Elev	3103 954 954
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▲ NA Use Hector Intl, ND altimeter setting.	MISSED APPROACH: Climb to 2000, then climbing left turn to 3000 direct ODOHU WP and hold.
FARGO APP CON★ 120.4 377.15	CTAF 122.9



<div>2000 ↑</div>	<div>3000 ↖</div>	<div>ODOHU ✦</div>		
			One Minute Holding Pattern	
<div><div>RW33</div><div>JOWZI</div><div>ODOHU</div><div>329°</div><div>149°</div><div>3000</div><div>329°</div></div>				
<div>5 NM</div>			<div>5 NM</div>	
CATEGORY	A	B	C	D
S-33	1480-1	526 (600-1)	1480-1½ 526 (600-1½)	NA
CIRCLING	1480-1	526 (600-1)	1480-1½ 526 (600-1½)	NA



NDB AIT
397

APP CRS
165°

Rwy Idg	4018
TDZE	1205
Apt Elev	1205

NDB or GPS RWY 16

AITKIN MUNI-STEVE KURTZ FIELD (AIT)



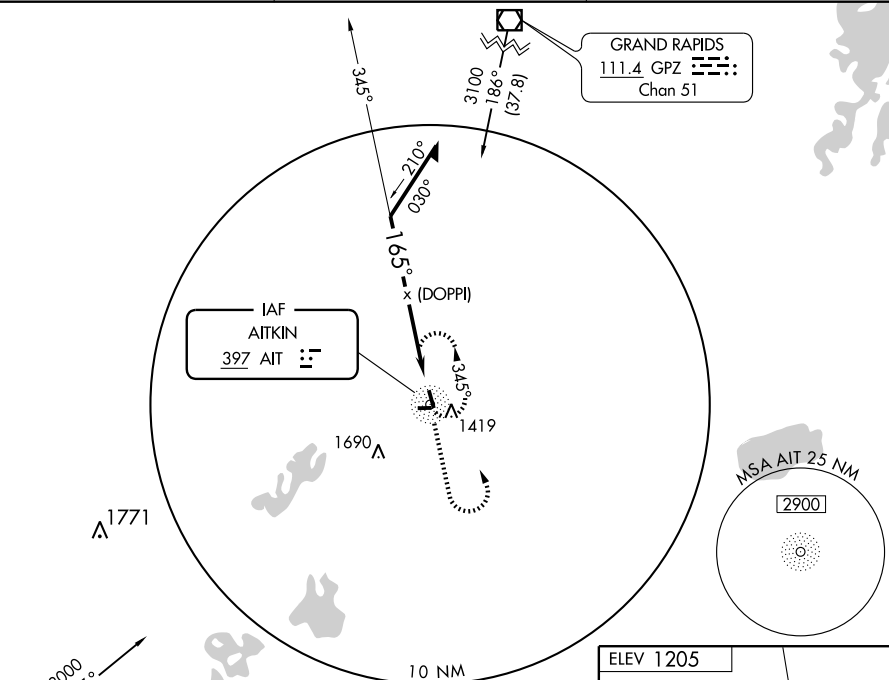
A NA

MISSED APPROACH: Climb to 3000 then left turn direct AIT NDB and hold.


AWOS-3
118.675

MINNEAPOLIS CENTER
118.05 239.0



UNICOM
123.05 (CTAF) 



NC-1. 17 DEC 2009 to 14 JAN 2010

BRAINERD
116.9 BRD 
Chan 116

The diagram shows a source moving to the right at 4 NM. A vertical dashed line represents the wavefront. The angle between the wavefront and the line of sight is 345° . The angle between the wavefront and the line of sight is 165° . The distance from the source to the wavefront is 3000. The distance from the wavefront to the observer is 4 NM. The observer is at a distance of 4 NM from the wavefront. The observer is at a distance of 4 NM from the wavefront.

3000		AIT  397
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ELEV 1205

165° to NDB

9L

TDZE 1205

4018 X 75

3335 X 150

16-34

9L

REIL Rwy 16 and 34

MIRL Rwy 16-34

CATEGORY	A	B	C	D
S-16	1840-1	635 (700-1)	1840-1 635 (700-1)	NA
CIRCLING	1840-1	635 (700-1)	1840-1 635 (700-1)	NA

Baro-VNAV NA when using Austin Muni altimeter setting.

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). Visibility reduction for helicopters NA.

If local altimeter setting not received, use Austin Muni altimeter setting and increase all DAs 48 feet and all MDAs 60 feet.

VDP NA when using Austin Muni altimeter setting. DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 2900 direct YEDUT and hold.

AWOS-3

109.8

ROCHESTER APP CON*

119.8 251,125

UNICOM

123.0 (CTAF) 0

5 NM Holding Pattern				VGSI and RNAV glidepath not coincident.				2900	YEDUT		
				BOYAY	SAPOC	BUNSE	*LNAV only				
2900 ← 343° 163° →				163° →	2900	1.8 NM to RWY16	*1.2 NM to RWY16	RWY16			
GS 3.00° TCH 40				6.1 NM	3.2 NM	0.6	1.2				
CATEGORY	A	B	C	D							
LPV DA	1510-1 250 (300-1)										
LNAV/VNAV DA	1592-1¼ 332 (400-1¼)										
LNAV MDA	1700-1	440 (500-1)	1700-1¼ 440 (500-1¼)	1700-1½ 440 (500-1½)							
CIRCLING	1780-1	520 (600-1)	1780-1½ 520 (600-1½)	1820-2 560 (600-2)							

MIRL Rwy 16-34 0

REIL Rwy 16 and 34 0

NC-1. 17 DEC 2009 to 14 JAN 2010

GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.

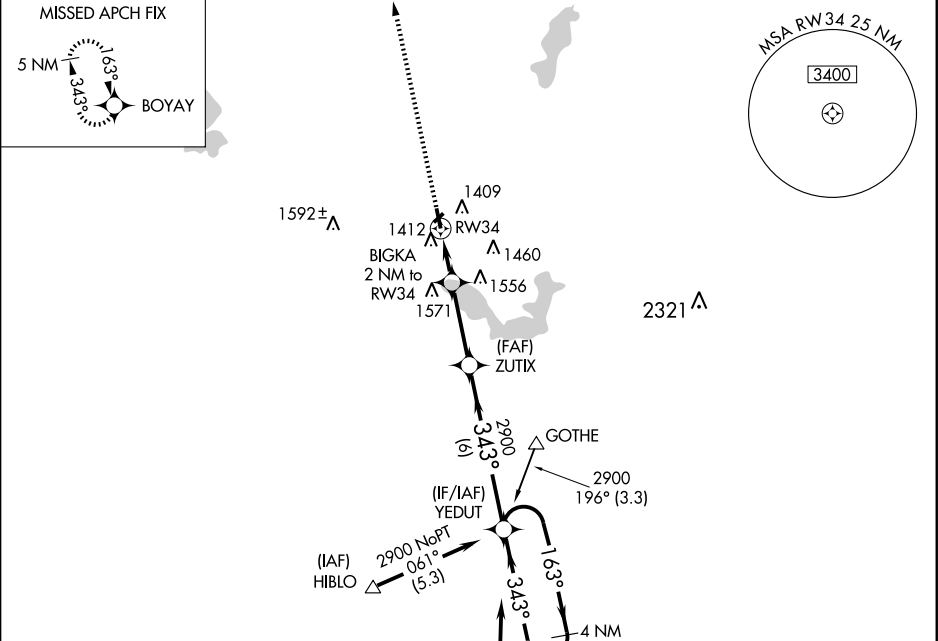
NA IAF ARM APPROACH MODE PRIOR TO IAF.

MISSED APPROACH: Climb to 2900 direct BOYAY WP and hold.

AWOS-3 109.8

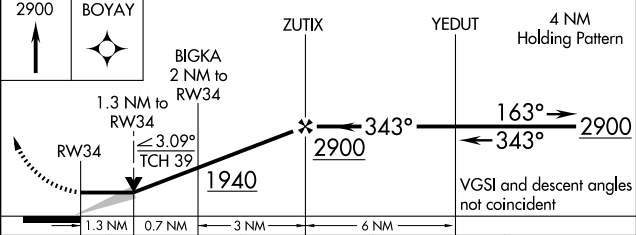
ROCHESTER APP CON ★ 119.8 251.125

UNICOM 123.0 (CTAF) 0

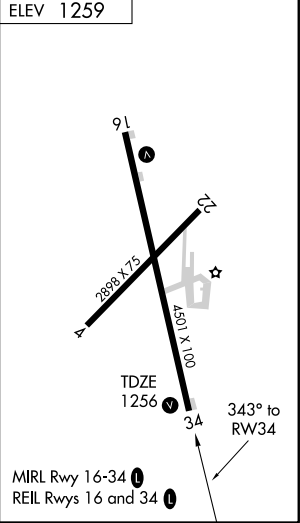


Procedure NA for arrivals at MCW VORTAC on airway radials 343 CW 032.

ELEV 1259



CATEGORY	A	B	C	D
RNAV MDA	1720-1	464 (500-1)	1720-1½ 464 (500-1½)	1720-1½ 464 (500-1½)
CIRCLING	1780-1	521 (600-1)	1780-1½ 521 (600-1½)	1820-2 561 (600-2)



VOR/DME AEL

109.8

Chan 35

APP CRS

335°

Rwy Idg

4501

TDZE

1256

Apt Elev

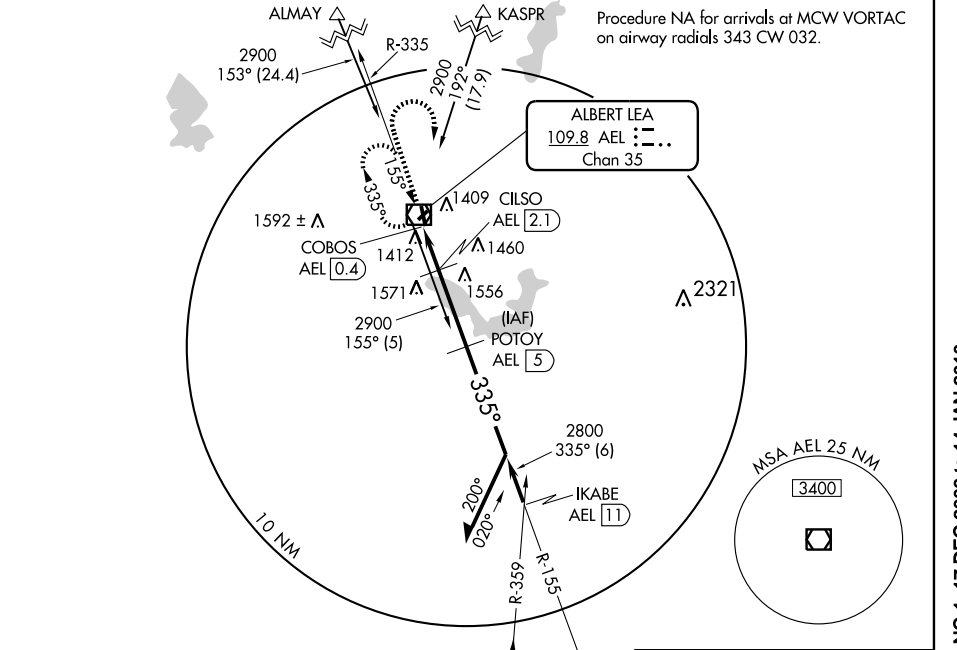
1259

NA

MISSED APPROACH:

Climb to 2100 then climbing right turn to 2900 direct AEL VOR/DME and hold.

AWOS-3 109.8	ROCHESTER APP CON ★ 119.8 251.125	UNICOM 123.0 (CTAF) 0
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ELEV 1259

2100

2900

AEL

109.8

COBOS

AEL 0.4

CILSO

AEL 2.1

≤ 3.37°

TCH 39

1880

2800

1.7 NM

2.9 NM

POTOTY

AEL 5

155°

335°

2900

Remain within 10 NM

VGSI and descent angles not coincident

CATEGORY	A	B	C	D
S-34	1720-1 464 (500-1)		1720-1½ 464 (500-1½)	1720-1½ 464 (500-1½)
CIRCLING	1780-1 521 (600-1)		1780-1½ 521 (600-1½)	1820-2 561 (600-2)

MIRL Rwy 16-34 0

REIL Rwy 16 and 34 0

NC-1: 17 DEC 2009 to 14 JAN 2010

AL-5420 (FAA)

VOR/DME AEL 109.8 Chan 35	APP CRS 175°	Rwy Idg 4501 TDZE 1259 Apt Elev 1259
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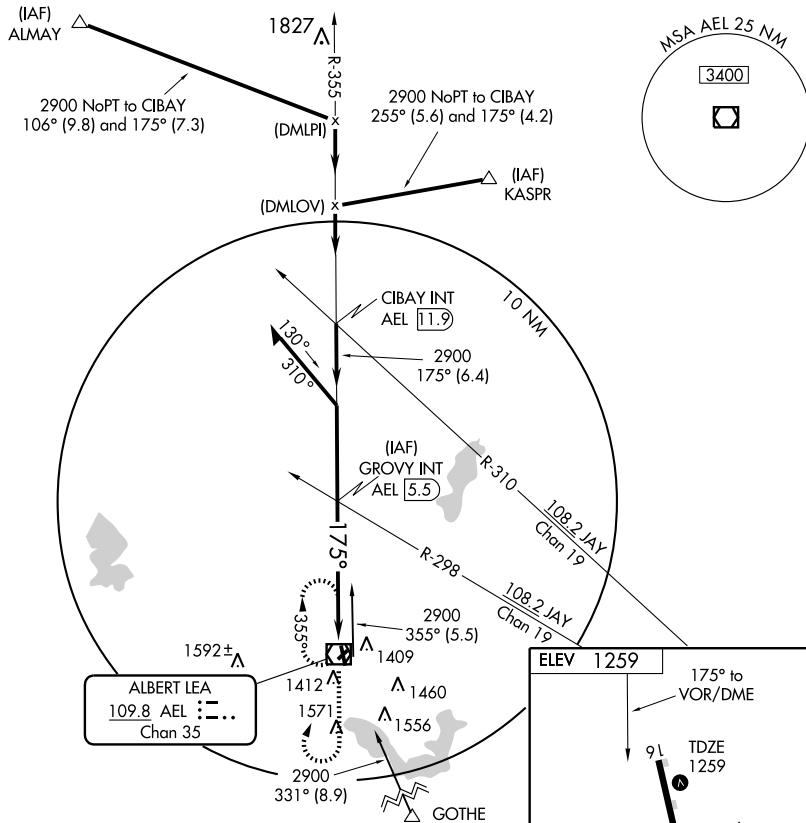
VOR RWY 16
ALBERT LEA MUNI (AEL)



MISSED APPROACH: Climb to 2200 then climbing right turn to 2900 direct AEL VOR/DME and hold.

AWOS-3
109.8

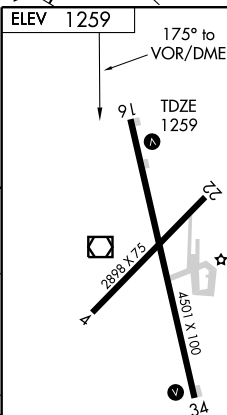
ROCHESTER APP CON ★
119.8 251.125

UNICOM
123.0 (CTAF) **L**

NC-1. 17 DEC 2009 to 14 JAN 2010

[illegible]

CATEGORY	A	B	C	D
S-16	1720-1 461 (500-1)		1720-1½ 461 (500-1½)	1720-1½ 461 (500-1½)
CIRCLING	1780-1 521 (600-1)		1780-1½ 521 (600-1½)	1820-2 561 (600-2)



MIRL Rwy 16-34 **L**
REIL Rwy 16 and 34 **L**

LOC I-EEZ <u>110.5</u>	APP CRS 315°	Rwy Idg 5100 TDZE 1423 Apt Elev 1424
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ILS or LOC RWY 31

ALEXANDRIA/CHANDLER FIELD (AXN)



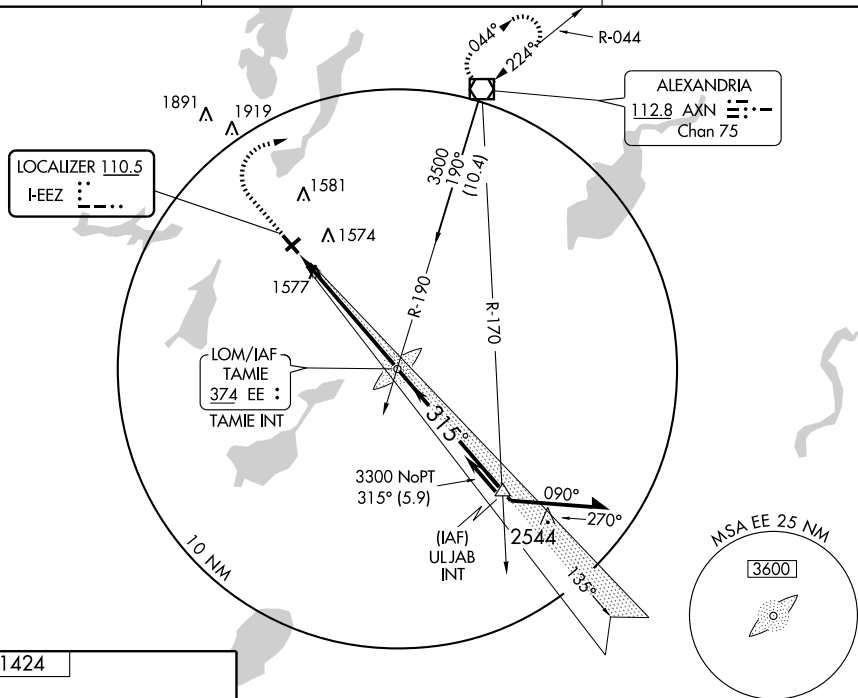
Inoperative table does not apply to S-LOC 31 Category C.

ODALS



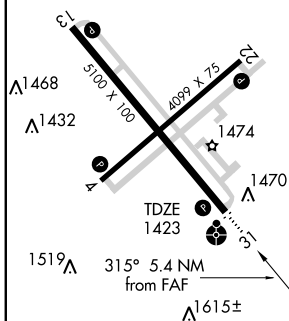
MISSED APPROACH: Climb to 2500 then climbing right turn to 3500 direct AXN VOR/DME and hold.

ASOS 118.375	MINNEAPOLIS CENTER 126.1 269.2	UNICOM 123.0 (CTAF) U
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NC-1. 17 DEC 2009 to 14 JAN 2010

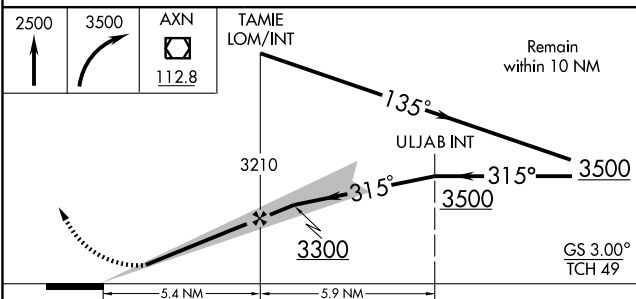
ELEV	1424
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REIL Rwy's 4,13 and 22 **L**

MIRL Rwy 4-22 and 13-31 L

FAF to MAP 5.4 NM

Knots	60	90	120	150	180
Min:Sec	5:24	3:36	2:42	2:10	1:48




CATEGORY	A	B	C	D
S-ILS 31	1623- $\frac{3}{4}$ 200 (200- $\frac{3}{4}$)			
S-LOC 31	1840- $\frac{3}{4}$ 417 (500- $\frac{3}{4}$)		1840-1 $\frac{1}{4}$ 417 (500-1 $\frac{1}{4}$)	
CIRCLING	1920-1 496 (500-1)		1920-1 $\frac{1}{2}$ 496 (500-1 $\frac{1}{2}$)	1980-2 556 (600-2)

WAAS CH 61007 W31A	APP CRS 315°	Rwy Idg TDZE Apt Elev	5100 1423 1424
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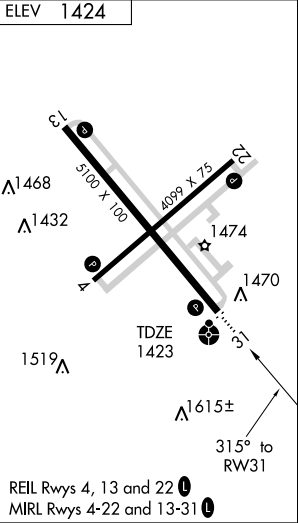
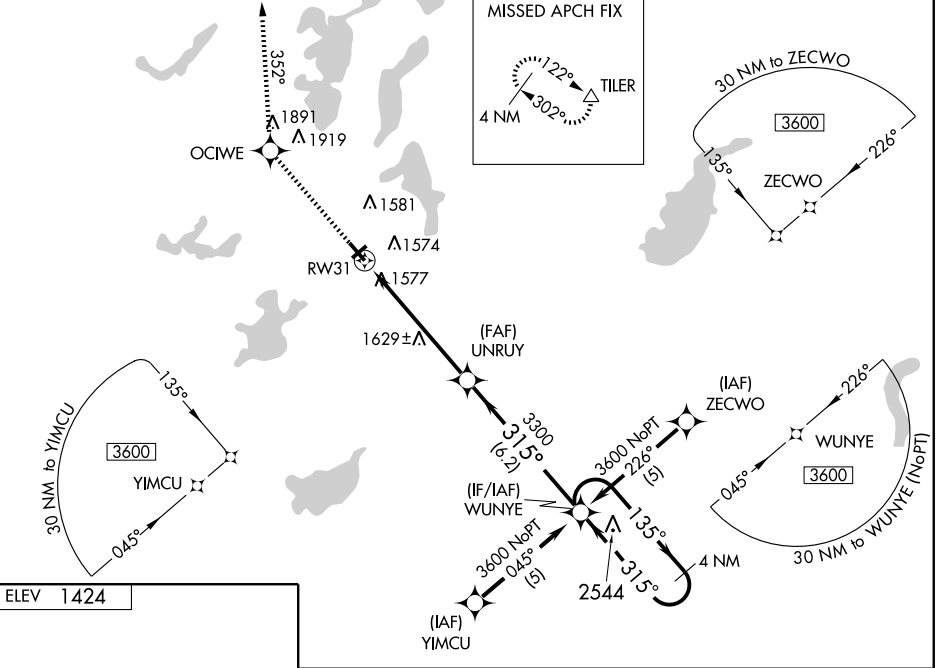
RNAV (GPS) RWY 31

ALEXANDRIA/ CHANDLER FIELD (AXN)

⚠ Inoperative table does not apply to LPV & LNAV/VNAV Cats A/B/C and LNAV Cat C. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). DME/DME RNP -0.3 NA. VDP and Baro-VNAV NA when using Glenwood altimeter setting. When local altimeter setting not received, use Glenwood altimeter setting and increase all DAs/MDAs 40 feet and increase LPV and LNAV/VNAV visibilities ¼ mile all Cats.

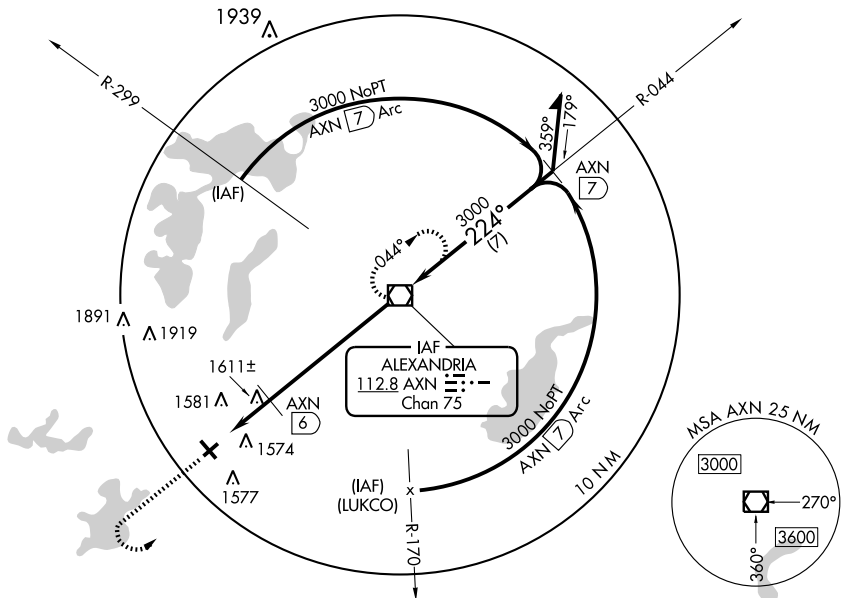
ODALS  MISSED APPROACH: Climb to 3500 direct OCIWE and via 352° track to TILER and hold.

ASOS 118.375	MINNEAPOLIS CENTER 126.1 269.2	UNICOM 123.0 (CTAF) Ⓛ
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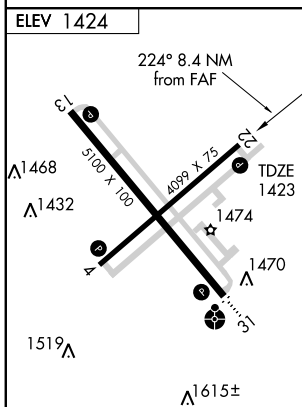


3500	OCIWE	track 352°	TILER	WUNYE	4 NM Holding Pattern
*LNAV only			UNRUY		
		*1.3 NM to RW31			
		1.3 NM	4.4 NM	6.2 NM	
CATEGORY	A	B	C	D	
LPV DA	1815-1¼		392 (400-1¼)		
LNAV/VNAV DA	1885-1½		462 (500-1½)		
LNAV MDA	1880-¾	457 (500-¾)	1880-1¼ 457 (500-1¼)	1880-1½ 457 (500-1½)	
CIRCLING	1920-1	496 (500-1)	1920-1½ 496 (500-1½)	1980-2 556 (600-2)	

ASOS 118,375	MINNEAPOLIS CENTER 126.1 269.2	UNICOM 123.0 (CTAF) 0
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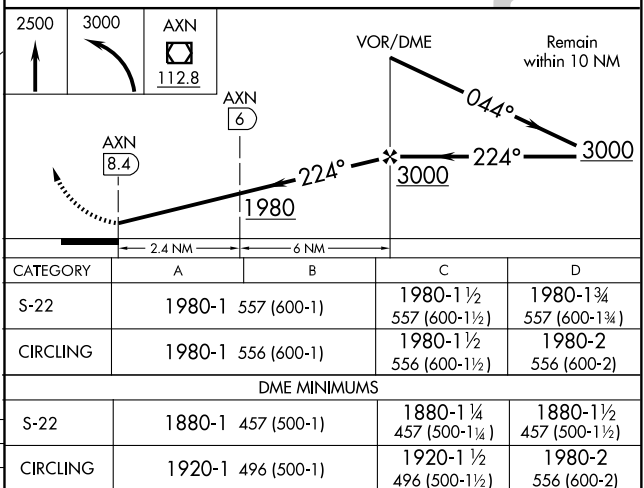


NC-1. 17 DEC 2009 to 14 JAN 2010



REIL Rwys 4, 13 and 22 **L**
MIRL Rwys 4-22 and 13-31 **L**

FAF to MAP 8.4 NM					
Knots	60	90	120	150	180
Min:Sec	8:24	5:36	4:12	3:22	2:48



APP CRS 130°	Rwy Idg TDZE Apt Elev	3500 1021 1021
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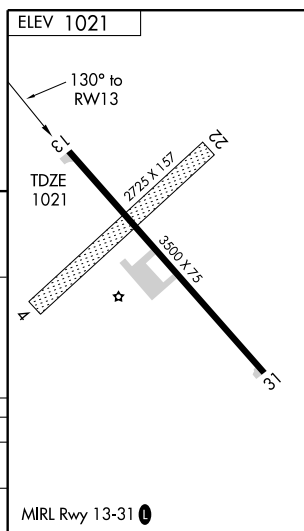
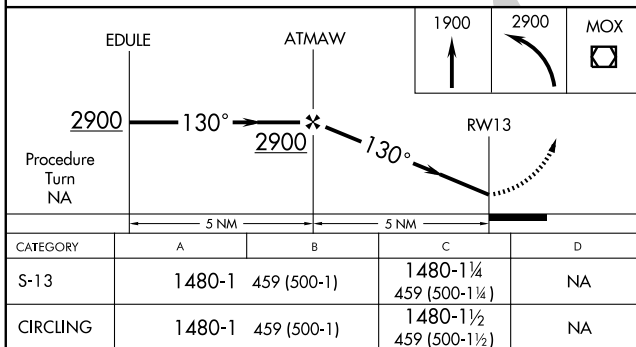
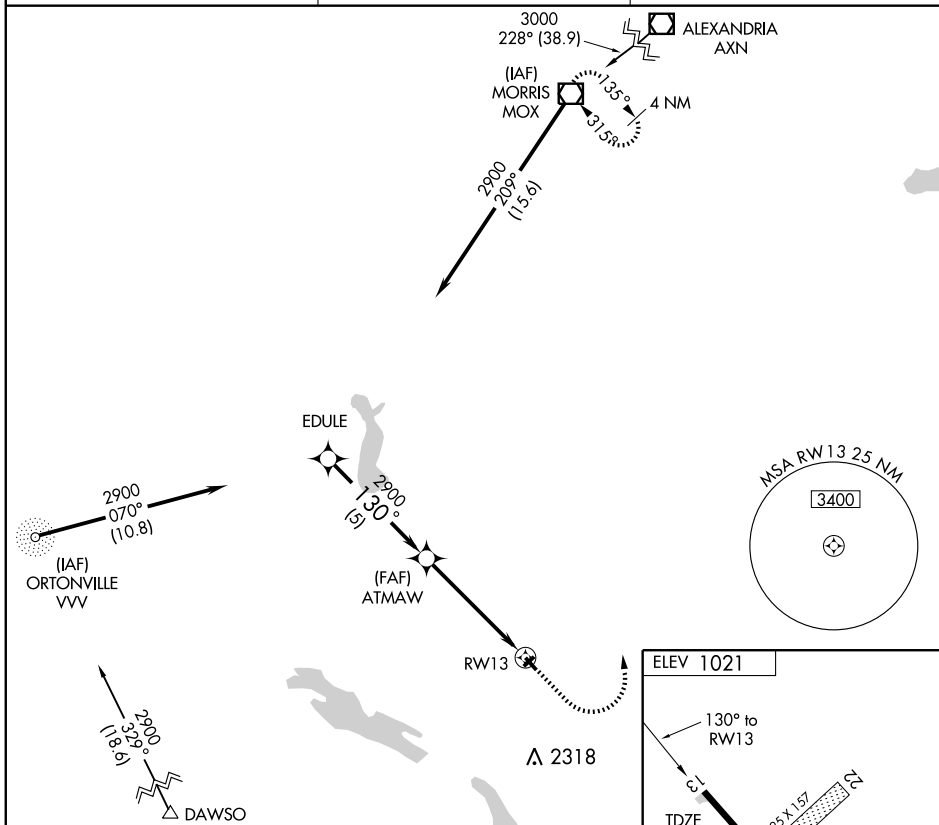
GPS RWY 13
APPLETON MUNI (AQP)



MISSED APPROACH: Climb to 1900, then climbing left turn to 2900 direct MOX VOR/DME and hold.

AWOS-3
356

PRINCETON RADIO
122.45

CTAF
122.9 

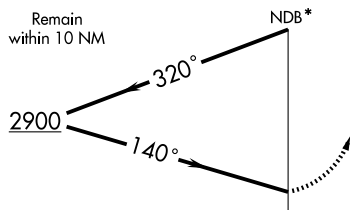
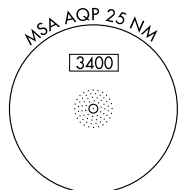
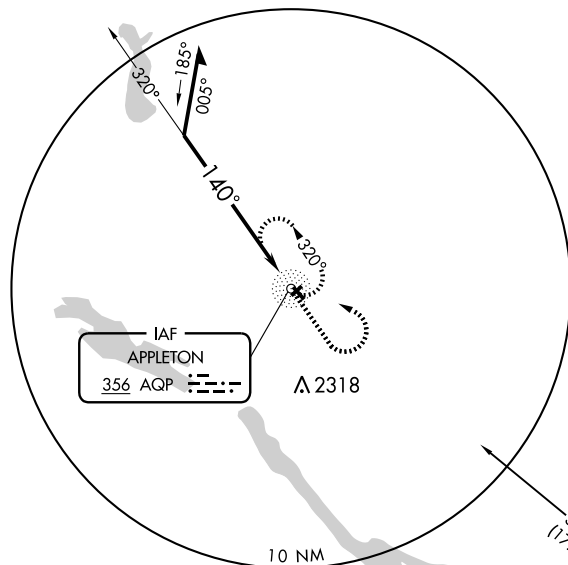
NDB AQP <u>356</u>	APP CRS 140°	Rwy Idg 3500 TDZE 1021 Apt Elev 1021
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NDB RWY 13
APPLETON MUNI (AQP)



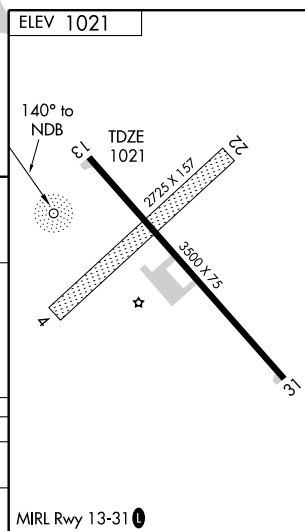
MISSED APPROACH: Climb to 1900 then climbing left turn to 3300 direct AQP NDB and hold.

AWOS-3 356	PRINCETON RADIO 122.45	CTAF 122.9
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* Maintain 3300 or above until established outbound for procedure turn.

CATEGORY	A	B	C	D
S-13	1600-1	579 (600-1)	1600-1½ 579 (600-½)	NA
CIRCLING	1600-1	579 (600-1)	1600-1½ 579 (600-½)	NA



LOC I-AUM	APP CRS	Rwy Idg	5800
110.55	351°	TDZE	1234
		Apt Elev	1234

ILS or LOC RWY 35

AUSTIN MUNI (AUM)

▽ Inoperative table does not apply to S-ILS 35 when using local altimeter setting. When local altimeter setting not received, use Albert Lea altimeter setting and increase DA to 1532 feet and all MDAs 60 feet, increase S-LOC 35 Cat C/D visibility $\frac{1}{4}$ mile. Visibility reduction by helicopters NA. For inoperative MALS, increase S-LOC 35 Cat A/B visibility to 1 mile, when using Albert Lea altimeter setting increase S-LOC 35 Cat A/B visibility to 1 mile.

MALS

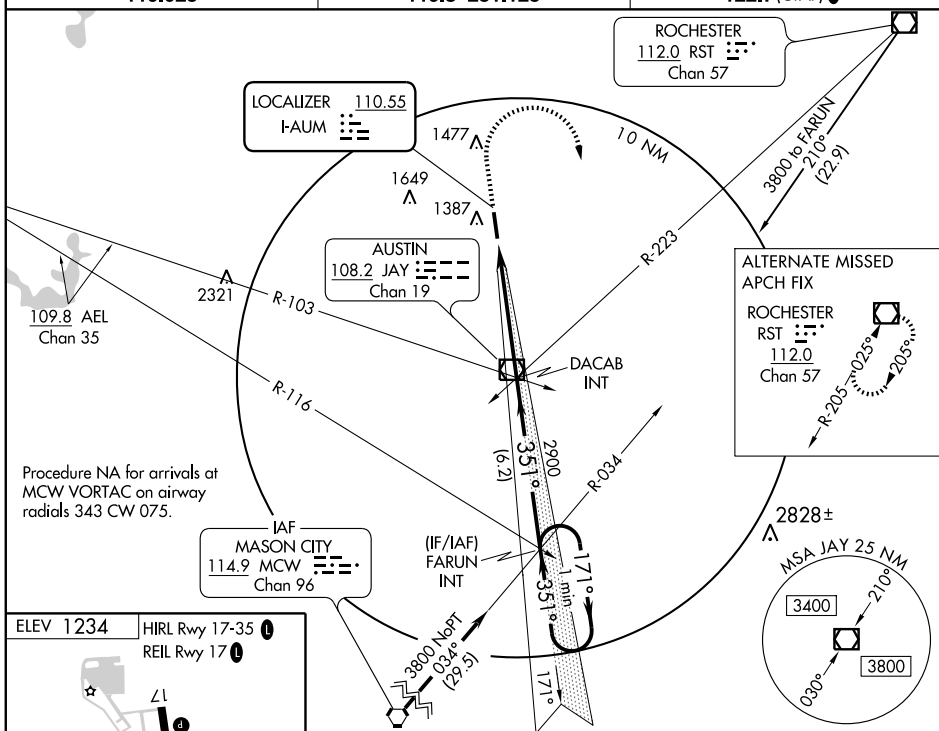


MISSED APPROACH: Climb to 1800 then climbing right turn to 3800 via heading 150° and MCW VORTAC R-034 to FARUN INT and hold.

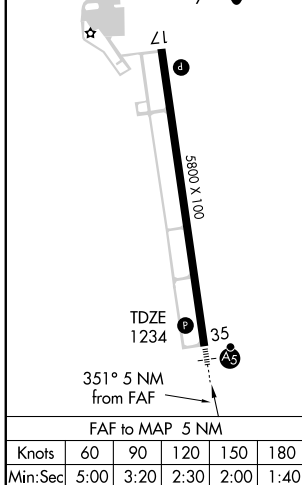
AWOS-3
119.025

ROCHESTER APP CON ★
119.8 251.125

UNICOM
122.7 (CTAF) ①



ELEV 1234	HIRL Rwy 17-35 ①
	REIL Rwy 17 ①



1800	3800	MCW R-034 114.9	FARUN INT	FARUN INT	One Minute Holding Pattern
↑	↘ 150°				
VGSI and ILS glidepath not coincident.					
5 NM 6.2 NM 171° → 3800 351° ← 2900					
GS 3.00° TCH 48					
CATEGORY	A	B	C	D	
S-ILS 35	1484- $\frac{3}{4}$ 250 (300- $\frac{3}{4}$)				
S-LOC 35	1700- $\frac{3}{4}$ 466 (500- $\frac{3}{4}$)				1700-1 466 (500-1)
CIRCLING	1740-1 506 (600-1)	1740-1 $\frac{1}{2}$ 506 (600-1 $\frac{1}{2}$)		1800-2 566 (600-2)	

DME/DME RNP -0.3 NA.
Visibility reduction by helicopters NA.
When local altimeter setting not received, use Albert Lea altimeter setting and increase all MDAs 60 feet, and LNAV Cat C/D visibility ¼ mile.

MISSED APPROACH: Climb to 3800 direct FARUN and hold.

AWOS-3 119.025	ROCHESTER APP CON★ 119.8 251.125	UNICOM 122.7 (CTAF) 0
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Procedure NA for arrivals at RST VOR/DME on airway radials 260 CW 329.
Procedure NA for arrivals at MCW VORTAC on airway radials 343 CW 032.

	<div> <div> 4 NM Holding Pattern </div> <div> MAROE </div> <div> IGAME </div> <div> <div> 3800 </div> <div> FARUN </div> </div> </div>			
	<div> <div> <div> 2900 </div> <div> 349° </div> <div> 169° </div> </div> <div> <div> 2900 </div> <div> 169° </div> <div> 2900 </div> </div> <div> <div> 3.04° </div> <div> TCH 41 </div> <div> 1840 </div> </div> <div> <div> 1.8 NM to RW17 </div> <div> RW17 </div> </div> </div>			
	<div> <div> 6.2 NM </div> <div> 3.2 NM </div> <div> 1.8 NM </div> </div>			
CATEGORY	A	B	C	D
LNAV MDA	1700-1	469 (500-1)	1700-1 ¼ 469 (500-1 ¼)	1700-1 ½ 469 (500-1 ½)
CIRCLING	1740-1	506 (600-1)	1740-1 ½ 506 (600-1 ½)	1800-2 566 (600-2)

ELEV 1234

169° to RW17

TDZE 1231

5800 X 100

35

A5

HIRL Rwy 17-35 0

REIL Rwy 17 0

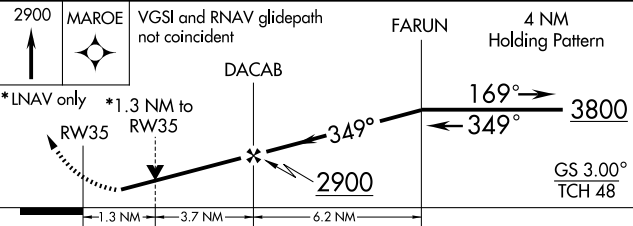
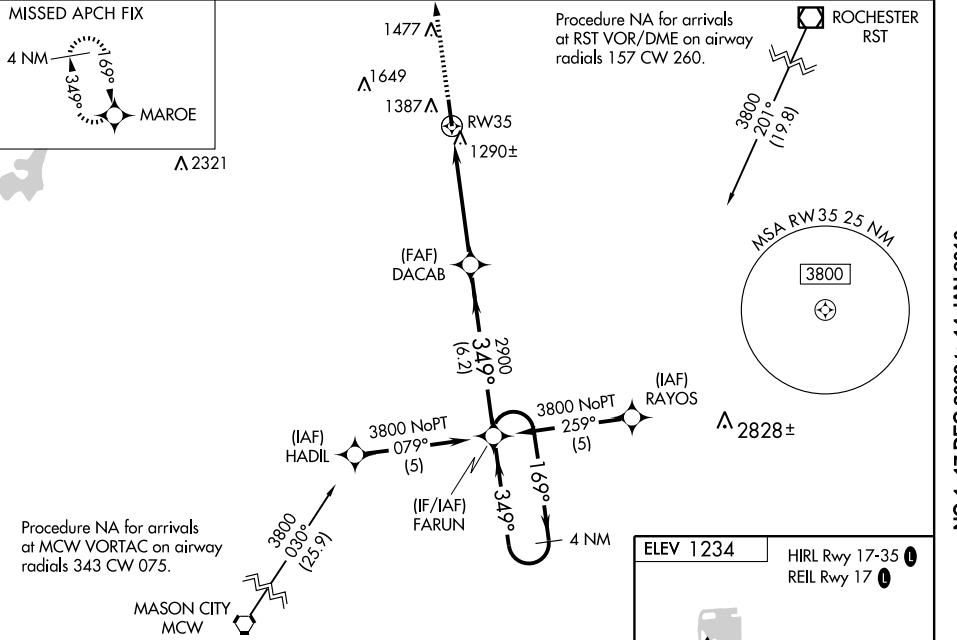
NC-1. 17 DEC 2009 to 14 JAN 2010

T For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (115°F).
A DME/DME RNP- 0.3 NA. Visibility reduction by helicopters NA.
 Baro-VNAV and VDP NA when using Albert Lea altimeter setting. When local altimeter setting not received, use Albert Lea altimeter setting and increase all DAs 48 feet and all MDAs 60 feet, increase LNAV/VNAV visibility ¼ mile all Cats, and LNAV Cat C/D visibility ¼ mile.
 For inoperative MALSR, when using Albert Lea altimeter setting, increase LPV visibility to 1¼ mile all Cats.

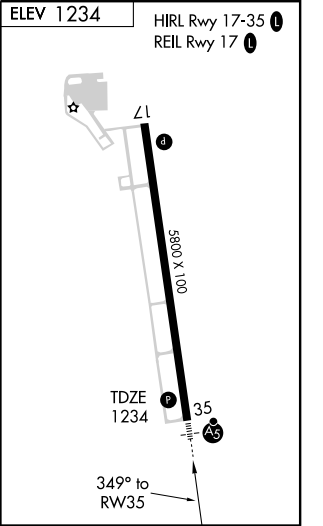
MALSR

MISSED APPROACH: Climb to 2900 direct MAROE and hold.

AWOS-3 119.025	ROCHESTER APP CON ★ 119.8 251.125	UNICOM 122.7 (CTAF)
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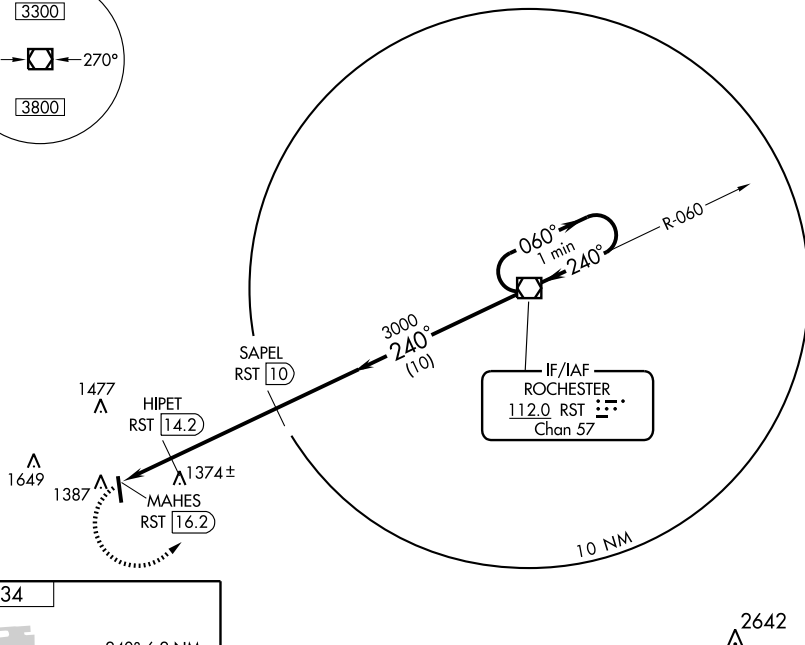
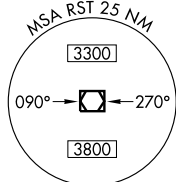
CATEGORY	A	B	C	D
LPV DA		1527-¾	293 (300-¾)	
LNNAV/VNAV DA		1578-¾	344 (400-¾)	
LNNAV MDA		1700-¾	466 (500-¾)	1700-1 466 (500-1)
CIRCLING	1740-1	506 (600-1)	1740-1½ 506 (600-1½)	1800-2 566 (600-2)



MISSED APPROACH: Climbing left turn to 3000 direct RST
VOR/DME and hold.

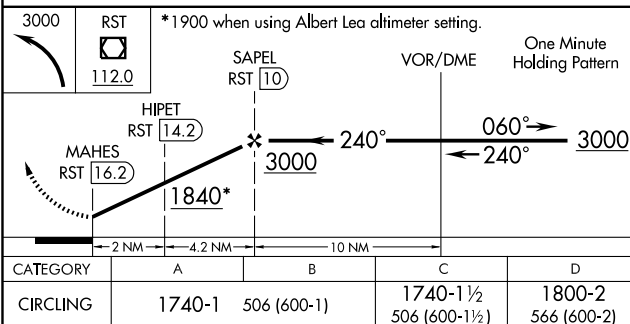
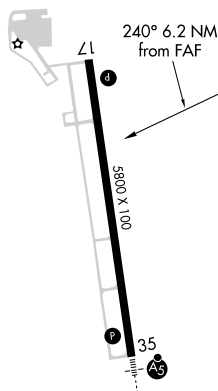
UNICOM
122.7 (CTAF) **L**

No PT for arrival on RST VOR/DME airway radials 310 CW 168.



NC-1. 17 DEC 2009 to 14 JAN 2010



ELEV 1234

HIRL Rwy 17-35 **L**

REIL Rwy 17 L

VOR/DME JAY <u>108.2</u> Chan 19	APP CRS 171°	Rwy Idg 5800 TDZE 1231 Apt Elev 1234
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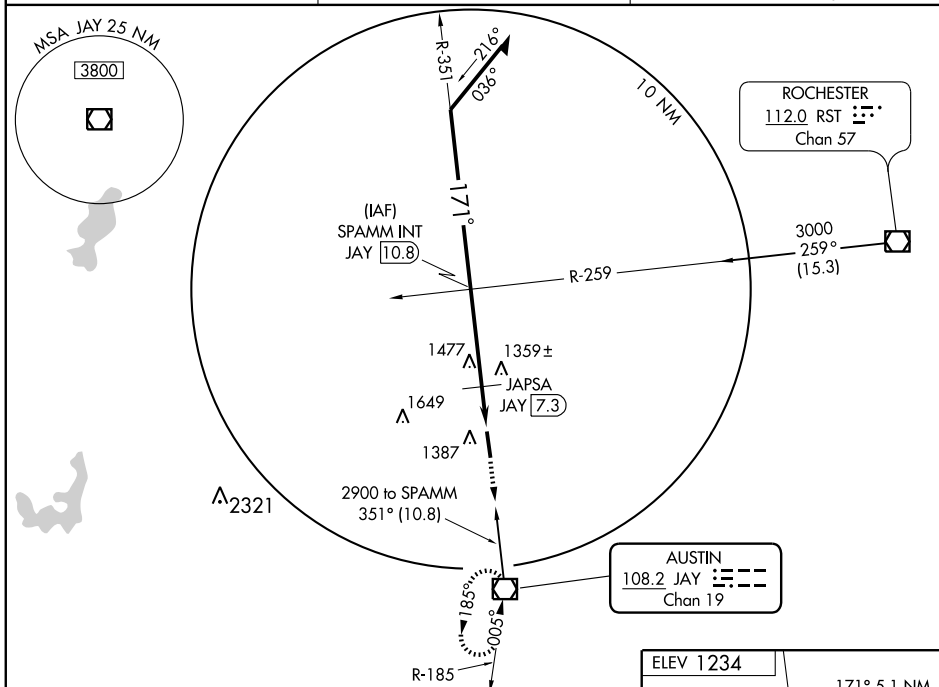
VOR RWY 17
AUSTIN MUNI (AUM)

 Visibility reduction by helicopters NA.
 NA When local altimeter setting not received, use Albert Lea altimeter setting and increase all MDAs 60 feet, and S-17 Cat. C/D and circling Cat. C visibility $\frac{1}{4}$ mile. Increase JAPSA FIX MINIMUMS S-17 Cat. C/D visibility $\frac{1}{4}$ mile.

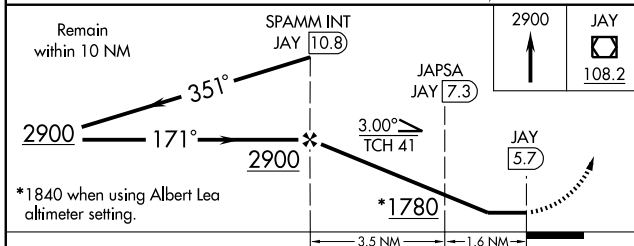
MISSED APPROACH: Climb to 2900
direct JAY VOR/DME and hold.

AWOS-3
119.025

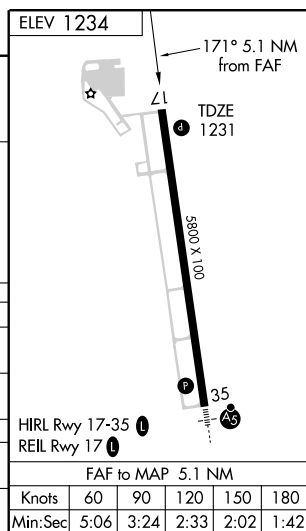
ROCHESTER APP CON ★
119.8 251.125

UNICOM
122.7 (CTAF) 

NC-1. 17 DEC 2009 to 14 JAN 2010



CATEGORY	A	B	C	D
S-17	1780-1	549 (600-1)	1780-1½ 549 (600-1½)	1780-1¾ 549 (600-1¾)
CIRCLING	1780-1	546 (600-1)	1780-1½ 546 (600-1½)	1800-2 566 (600-2)
JAPSA FIX MINIMUMS				
S-17	1620-1 389 (400-1)			1620-1¼ 389 (400-1¼)
CIRCLING	1740-1	506 (600-1)	1740-1½ 506 (600-1½)	1800-2 566 (600-2)



VOR/DME JAY	APP CRS	Rwy Idg	5800
108.2	351°	TDZE	1234
Chan 19		Apt Elev	1234

Visibility reduction by helicopters NA.

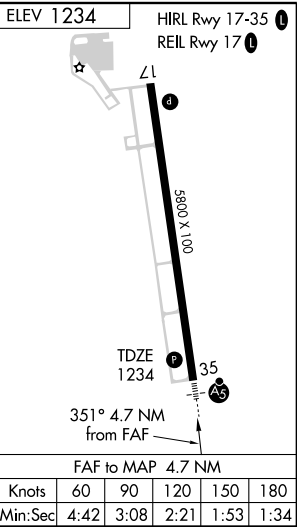
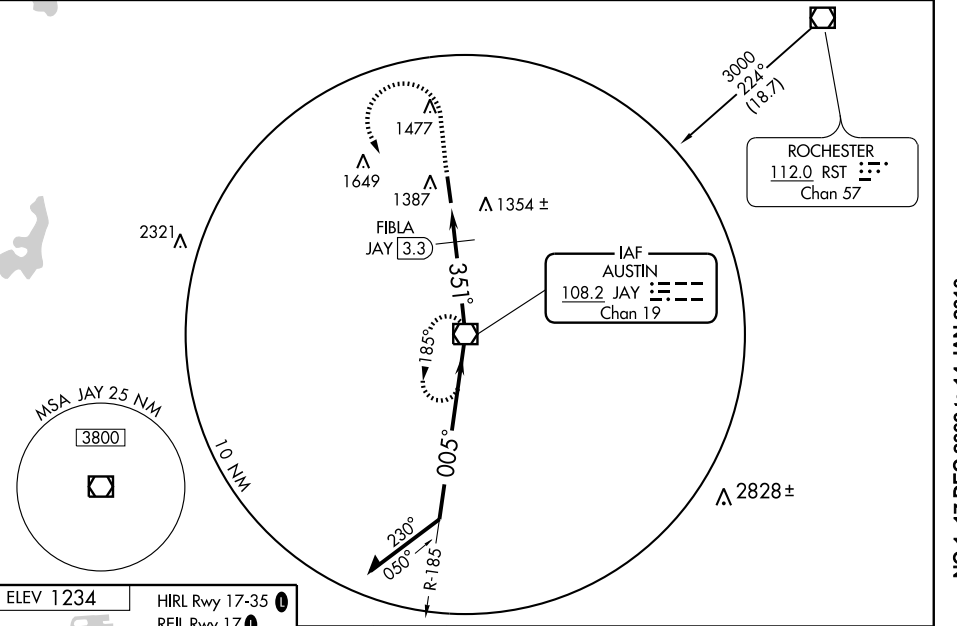
When local altimeter setting not received, use Albert Lea altimeter setting and increase all MDAs 60 feet, and S-35 Cats C/D visibility ¼ mile.

For inoperative MALS, increase S-35 Cats A/B visibility to 1 mile and Cat D to 1¼ mile, when using Albert Lea altimeter setting increase S-35 Cats A/B and FIBLA FIX MINIMUMS S-35 Cats A/B visibility to 1 mile.

MALS

MISSED APPROACH: Climb to 2100 then climbing left turn to 2900 direct JAY VOR/DME and hold.

AWOS-3 119.025	ROCHESTER APP CON ★ 119.8 251.125	UNICOM 122.7 (CTAF) 0
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2100

2900

JAY 108.2

VGSI and descent angles not coincident.

VOR/DME 6000

185°

2900

005°

2900

1700*

351°

3.24° TCH 42

1.4 NM

3.3 NM

*1760 when using Albert Lea altimeter setting.

CATEGORY	A	B	C	D
S-35	1700-¾ 466 (500-¾)			1700-1 466 (500-1)
CIRCLING	1740-1	506 (600-1)	1740-1½ 506 (600-1½)	1800-2 566 (600-2)
FIBLA FIX MINIMUMS				
S-35	1620-¾ 386 (400-¾)			1620-1 386 (400-1)
CIRCLING	1740-1	506 (600-1)	1740-1½ 506 (600-1½)	1800-2 566 (600-2)

NC-1: 17 DEC 2009 to 14 JAN 2010

APP CRS 117°
Rwy Idg 5499
TDZE 1084
Apt Elev 1084

RNAV (GPS) RWY 12
BAUDETTE INTL (BDE)

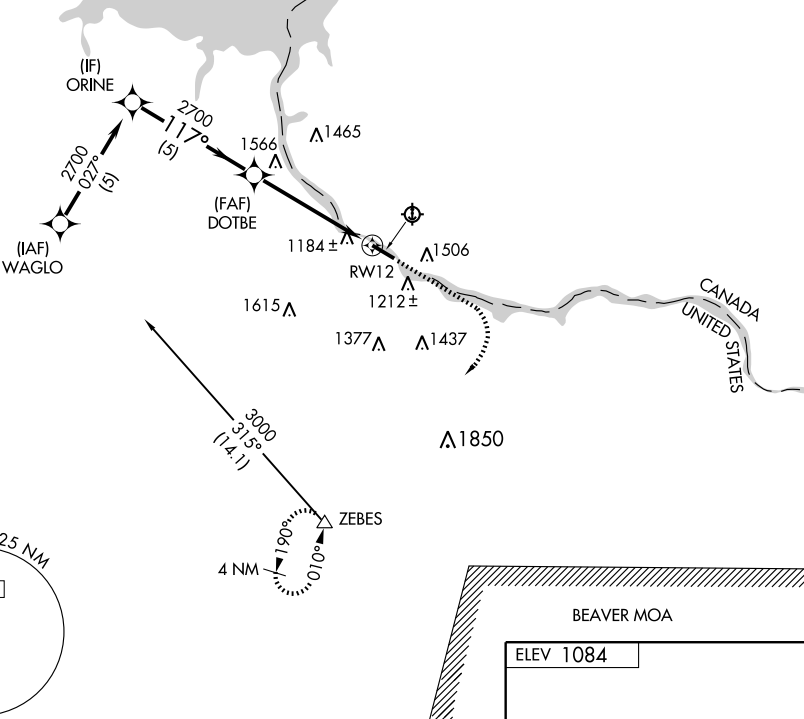
Baro-VNAV NA below -17°C (2°F).
GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 2300 then climbing right turn to 3000 direct ZEBES WP and hold.

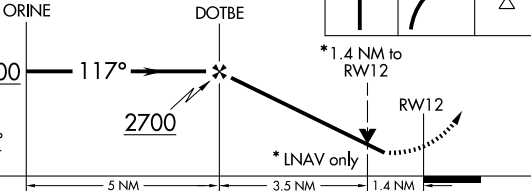
ASOS 126.775

PRINCETON RADIO 122.4

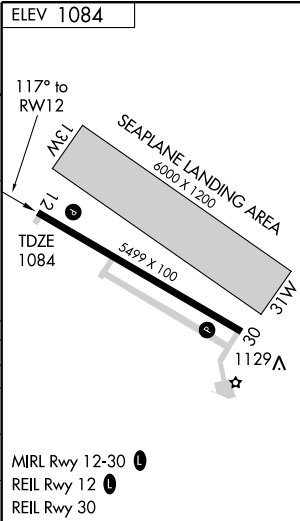
UNICOM 122.8 (CTAF) 0



Procedure Turn NA




CATEGORY	A	B	C	D
GLS PA DA	NA			
RNAV/VNAV DA	1440-1¼ 356 (400-1¼)			
RNAV MDA	1560-1 476 (500-1)	1560-1¼ 476 (500-1¼)	1560-1½ 476 (500-1½)	
CIRCLING	1860-1¼ 776 (800-1¼)	1860-2¼ 776 (800-2¼)	1860-2½ 776 (800-2½)	



WAAS CH 81814 W30A	APP CRS 297°	Rwy Idg 5499 TDZE 1085 Apt Elev 1086
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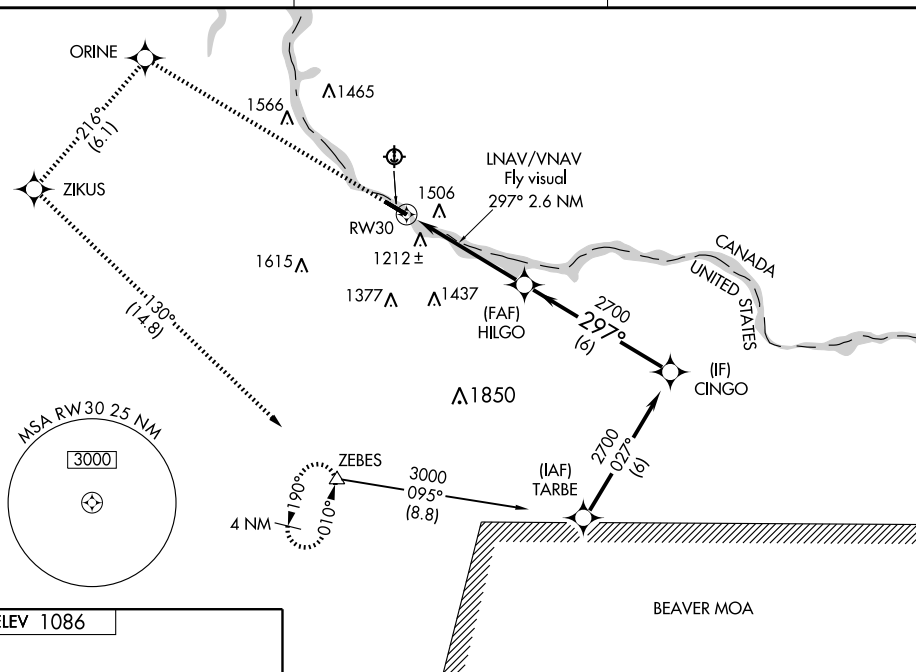
RNAV (GPS) RWY 30
BAUDETTE INTL (BDE)

- | | |
|--|---|
|  | <p>Circling NA northeast of Rwy 12-30.
DME/DME RNP- 0.3 NA.</p> <p>If local altimeter setting not received, use Warroad altimeter setting and increase all DAs/MDAs 80 feet.</p> <p>Baro-VNAV NA below -17°C (2°F).</p> <p>Baro-VNAV and VDP NA when using Warroad altimeter setting.</p> |
|--|---|

MISSED APPROACH: Climb to 3000 direct ORINE and via 216° track to ZIKUS and via 129° track to ZEBES and hold.

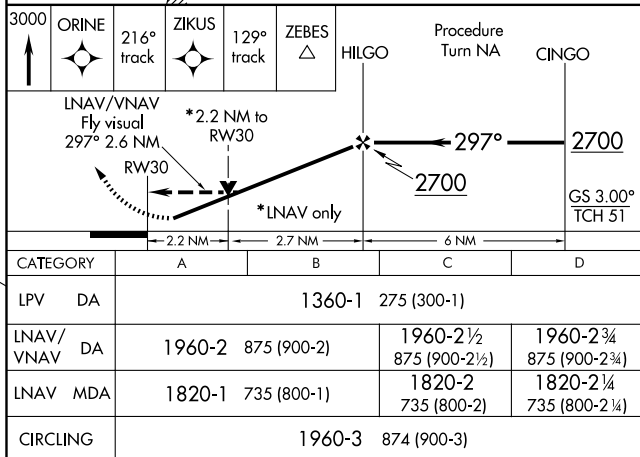
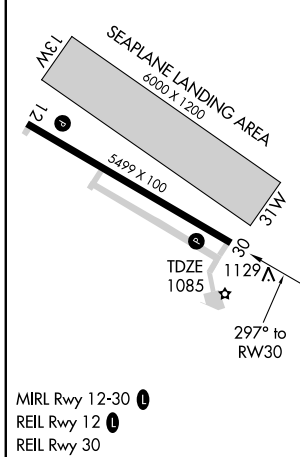
ASOS
126,775

PRINCETON RADIO
122.4

UNICOM
122.8 (CTAF) **L**

NC-1. 17 DEC 2009 to 14 JAN 2010

ELEV 1086



VOR/DME BDE <u>111.6</u> Chan 53	APP CRS 125°	Rwy Idg 5499 TDZE 1084 Apt Elev 1084
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VOR/DME RWY 12
BAUDETTE INTL (BDE)

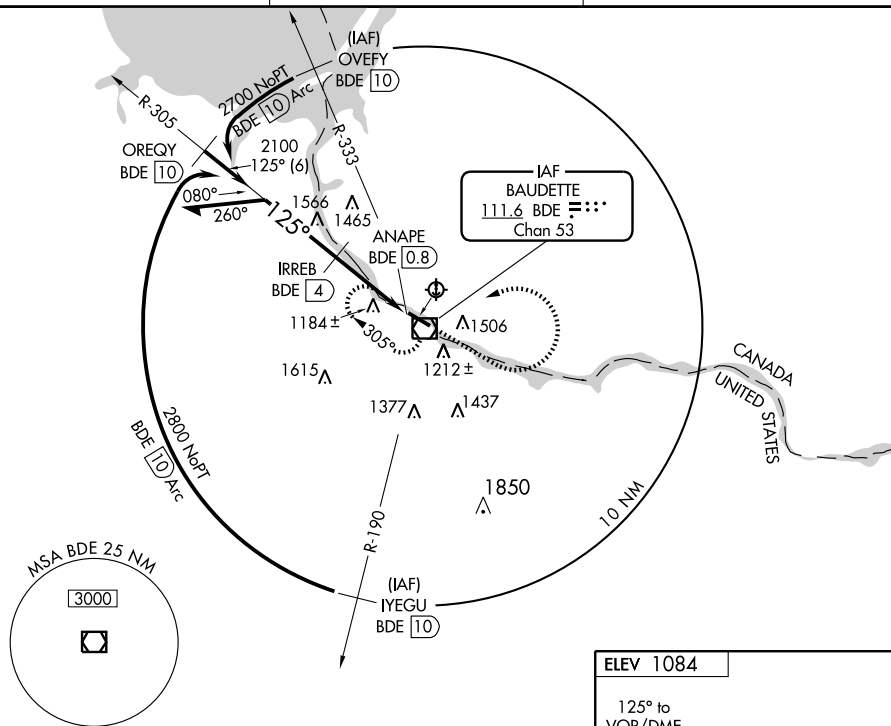


MISSED APPROACH: Climb to 2000 then climbing left turn to 2700 direct BDE VOR/DME and hold.

ASOS
126.775

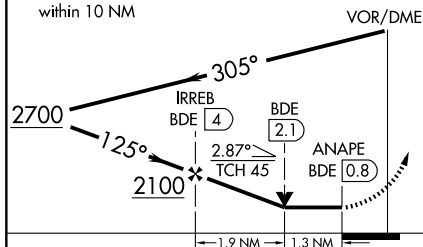
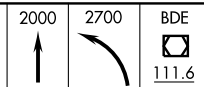
PRINCETON RADIO
122.4

UNICOM
122.8 (CTAF) **L**



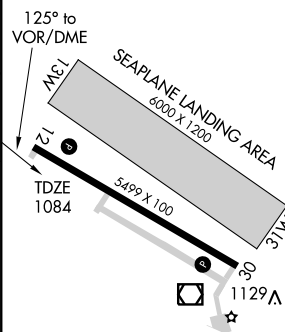
Remain
within 10 NM

VOR/DME



CATEGORY	A	B	C	D
S-12	1540-1	456 (500-1)	1540-1½ 456 (500-1½)	1540-1½ 456 (500-1½)
CIRCLING	1860-1 776 (800-1)	1860-1¼ 776 (800-1¼)	1860-2¼ 776 (800-2¼)	1860-2½ 776 (800-2½)

ELEV 1084

MIRL Rwy 12-30 **L**

REIL Rwy 12 L

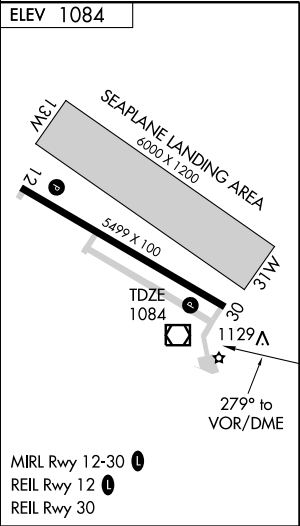
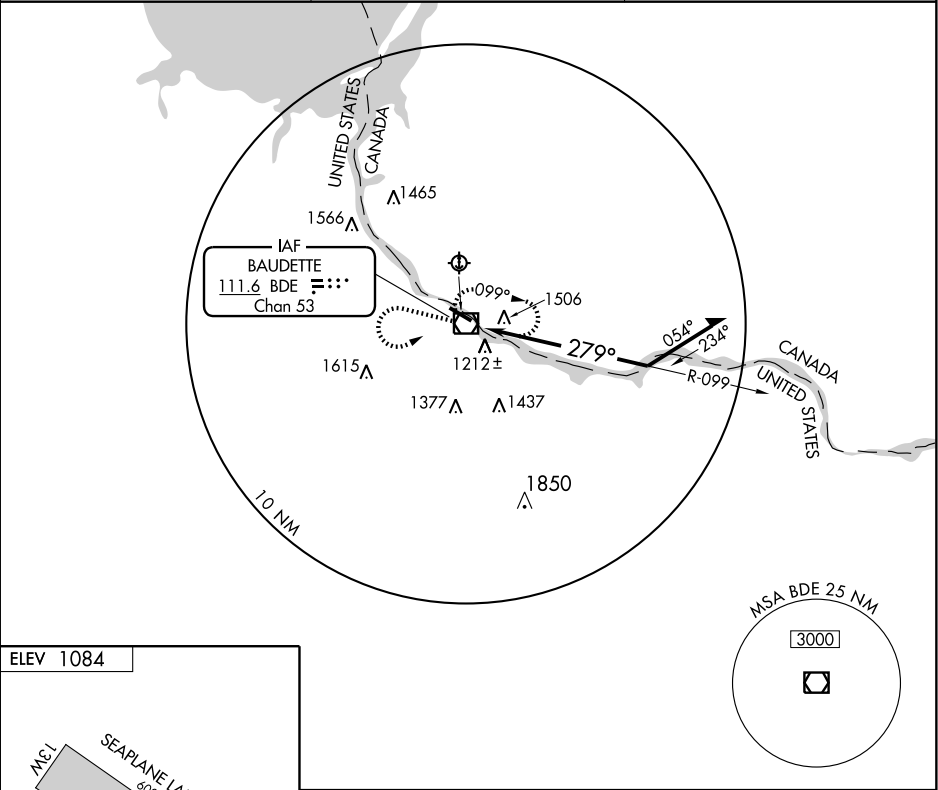
REIL Rwy 30



VOR/DME BDE	APP CRS	Rwy Idg	5499
111.6	279°	TDZE	1084
Chan 53		Apt Elev	1084

VOR RWY 30
BAUDETTE INTL (BDE)

<div><div></div><div></div></div>	MISSED APPROACH: Climb to 2700 then left turn direct BDE VOR/DME and hold.
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ASOS 126.775	PRINCETON RADIO 122.4	UNICOM 122.8 (CTAF) L
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2700 ↑		BDE  <u>111.6</u>	<div><div>VOR/DME</div><div><div>099°</div><div>2700</div><div>279°</div></div><div>Remain within 10 NM</div></div>			
CATEGORY	A	B	C	D		
S-30	1860-1 776 (800-1)	1860-1¼ 776 (800-1¼)	1860-2¼ 776 (800-2¼)	1860-2½ 776 (800-2½)		
CIRCLING	1860-1 776 (800-1)	1860-1¼ 776 (800-1¼)	1860-2¼ 776 (800-2¼)	1860-2½ 776 (800-2½)		

LOC/DME I-BJI	APP CRS	Rwy ldg
109.35	250°	5700
Chan 30 (Y)		TDZE 1389
		Apt Elev 1391

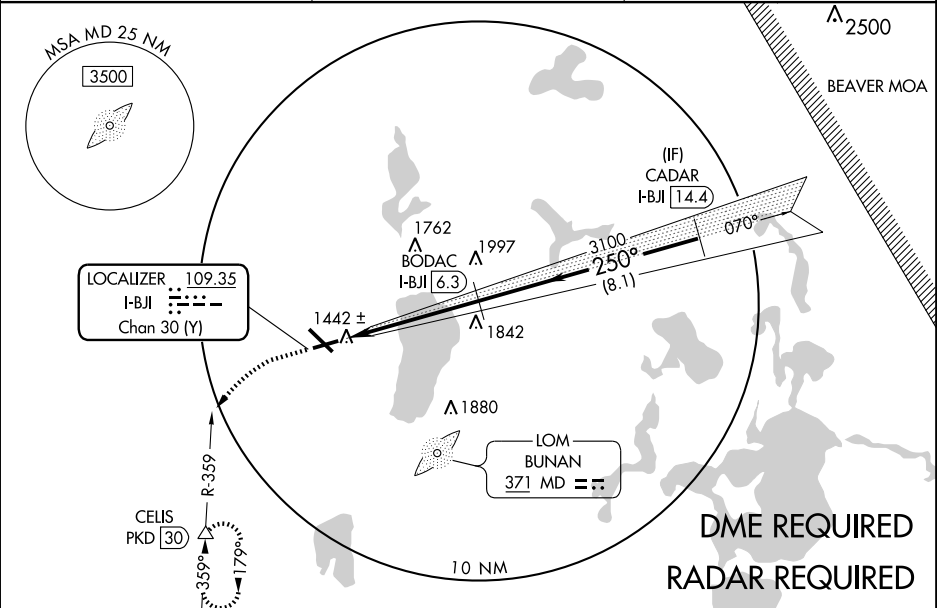
ILS or LOC/DME RWY 25

BEMIDJI RGNL (BJI)

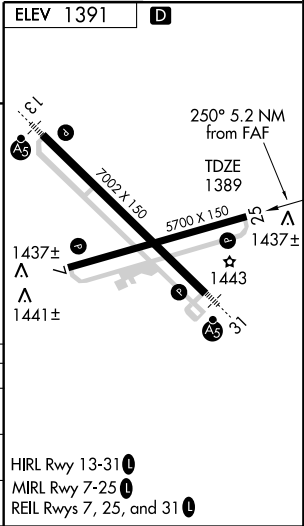
NA Visibility reduction by helicopters NA.
VDP NA when using Park Rapids altimeter setting.
If local altimeter setting not received, use Park Rapids altimeter setting; increase DA to 293 feet and visibility all Cats ¼ mile; increase all MDAs 100 feet, and visibility Cats C/D ¼ mile.

MISSED APPROACH: Climb to 2300 then climbing left turn to 3400 via PKD VOR/DME R-359 to CELUS/PKD 30 DME and hold.

AWOS-3 119.275	MINNEAPOLIS CENTER 134.75 251.1	UNICOM 122.8 (CTAF)
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<div>2300 ↑</div> <div>3400 PKD R-359</div> <div>CELUS △</div>	<div>BODAC I-BJI 6.3</div> <div>3100</div>	<div>Procedure Turn NA</div>	<div>CADAR I-BJI 14.4</div> <div>3100</div>	<div>GS 3.00° TCH 46</div>
Use I-BJI DME when on the localizer course.	<div>I-BJI 1.1</div> <div>I-BJI 2</div> <div>0.9</div> <div>4.3 NM</div> <div>8.1 NM</div>			
CATEGORY	A	B	C	D
S-ILS 25	1589-3/4 200 (200-3/4)			
S-LOC 25	1700-1 311 (400-1)			
CIRCLING	1860-1 469 (500-1)	1860-1 1/2 469 (500-1 1/2)	1960-2 569 (600-2)	



ADF required.

When local altimeter setting not received, use Park Rapids altimeter setting and increase DA to 1682; increase all MDA 100 feet and S-LOC Cat C/D visibility ¼ mile.

For inoperative MALSR, increase S-ILS 31 all Cats visibility to 1 mile.

MALSR

MISSED APPROACH: Climb to 2300 then climbing left turn to 3200 direct BUNAN LOM and hold.

AWOS-3

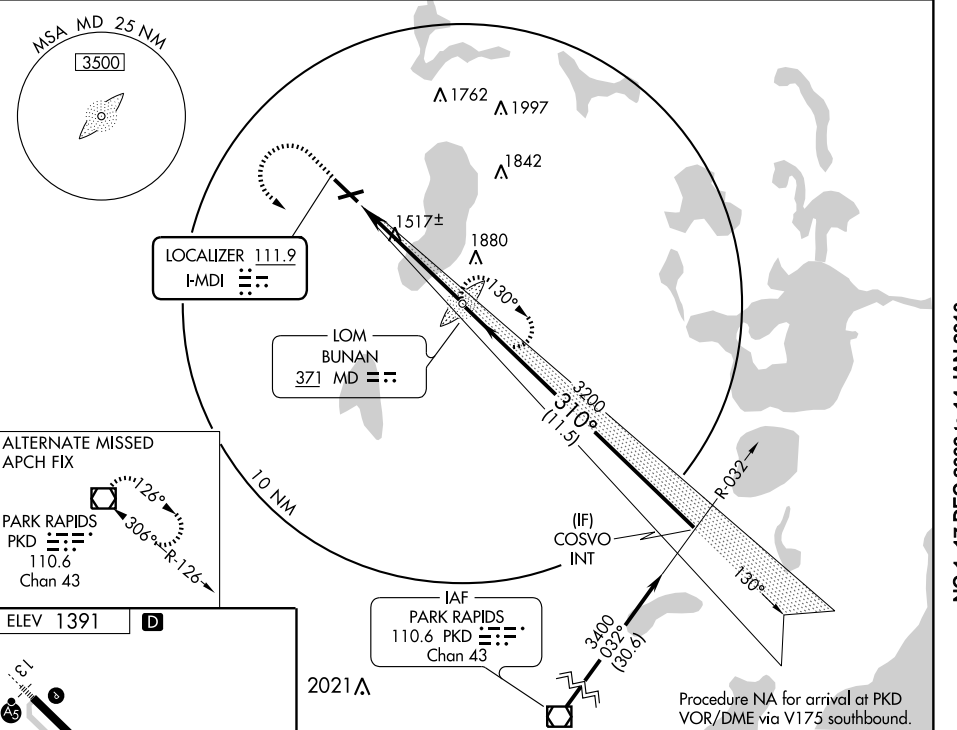
119.275

MINNEAPOLIS CENTER

134.75 251.1

UNICOM

122.8 (CTAF)



ALTERNATE MISSED APCH FIX

PARK RAPIDS PKD

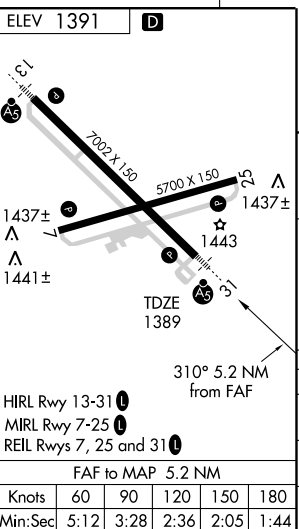
110.6

Chan 43

126°

306°


R-126°



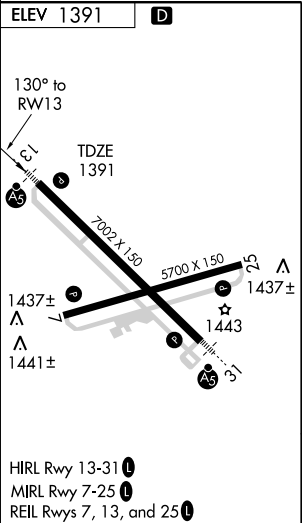
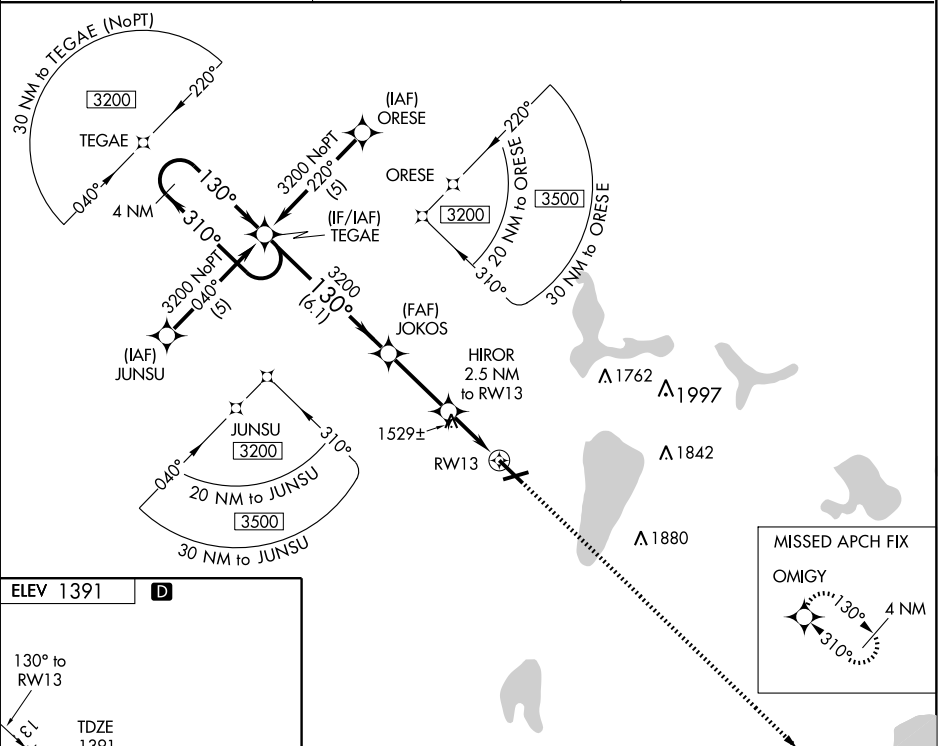
CATEGORY	A	B	C	D
S-ILS 31	1589-½ 200 (200-½)			
S-LOC 31	1780-½ 391 (400-½)			1780-¾ 391 (400-¾)
CIRCLING	1840-1 449 (500-1)	1860-1 469 (500-1)	1860-1½ 469 (500-1½)	1960-2 569 (600-2)

APP CRS	Rwy Idg	7002
130°	TDZE	1391
	Apt Elev	1391

RNAV (GPS) RWY 13
BEMIDJI RGNL (BJI)

<p>For inoperative MALS, increase LNAV Cats A/B/C visibility to 1 mile, Cat D visibility to 1¼ mile. DME/DME RNP -0.3 NA. Visibility reduction by helicopters NA. VDP NA when using Park Rapids altimeter setting. When local altimeter setting not received, use Park Rapids altimeter setting, and increase all MDA 100 feet. For inoperative MALS when using Park Rapids altimeter setting, increase LNAV Cats A/B visibilities to 1 mile.</p>	<p>MALS</p> 	<p>MISSED APPROACH: Climb to 3200 direct OMIGY and hold.</p>
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<p>AWOS-3 119.275</p>	<p>MINNEAPOLIS CENTER 134.75 251.1</p>	<p>UNICOM 122.8 (CTAF) 0</p>
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4 NM Holding Pattern		TEGAE	JOKOS	3200	OMIGY
		3200	3200	3200	3200
		310°	130°	130°	130°
		130°	130°	130°	130°
		6.1 NM	3 NM	1.4 NM	1.1 NM
CATEGORY	A	B	C	D	
LNAV MDA	1780-¾	389 (400-¾)		1780-1	389 (400-1)
CIRCLING	1840-1 449 (500-1)	1860-1 469 (500-1)	1860-1½ 469 (500-1½)	1960-2	569 (600-2)

WAAS CH 99711 W31A	APP CRS 310°	Rwy Idg TDZE 7002 1389 Apt Elev 1391
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RNAV (GPS) RWY 31

BEMIDJI RGNL (BJT)

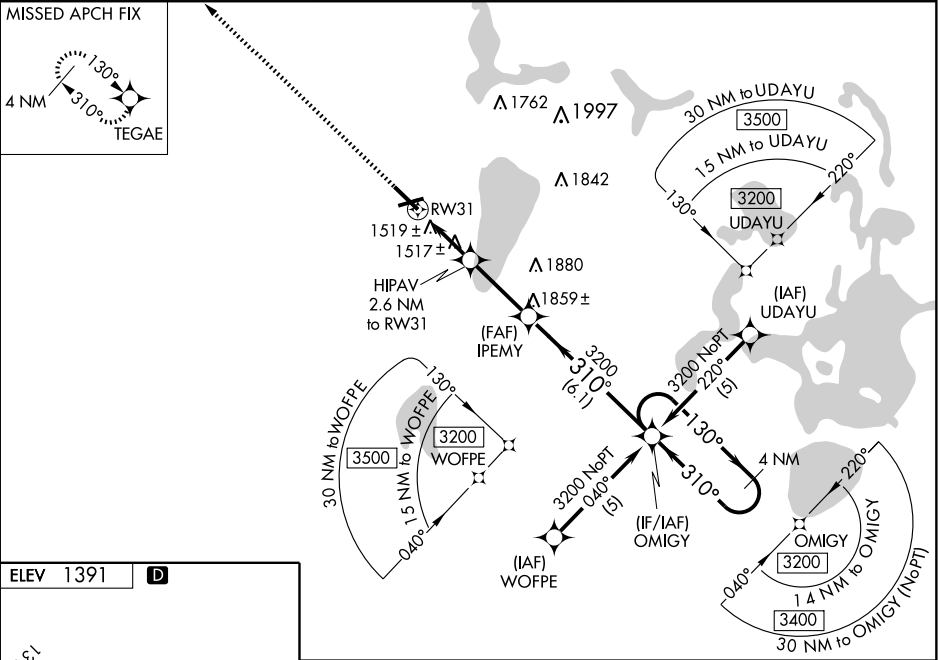
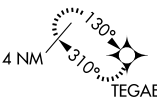
⚠ For inoperative MALSR, increase LNAV Cat D visibility to 1/4 mile. Baro-VNAV NA when using Park Rapids altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). DME/DME RNP -0.3 NA. VDP NA when using Park Rapids altimeter setting. When local altimeter setting not received, use Park Rapids altimeter setting and increase all DA 93 feet and all MDA 100 feet; increase LNAV/VNAV all Cats visibility 1/2 mile and LNAV Cat C visibility 1/4 mile. For inoperative MALSR when using Park Rapids altimeter setting, increase LPV visibility to 1 mile all Cats.

MALSR


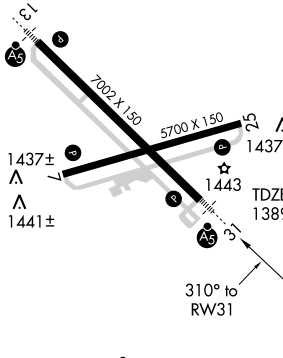
MISSED APPROACH: Climb to 3200 direct TEGAE and hold.

AWOS-3 119.275	MINNEAPOLIS CENTER 134.75 251.1	UNICOM 122.8 (CTAF) 0
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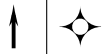
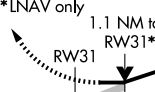


MISSED APCH FIX



ELEV 1391 **D**



HIRL Rwy 13-31 **0**
MIRL Rwy 7-25 **0**
REIL Rwy 7, 13, and 25 **0**

3200 TEGAE		HIPAV 2.6 NM to RW31		IPEMY		OMIGY		4 NM Holding Pattern	
									
LNAV only		1.1 NM to RW31		2260*		310°		130°→ 3200 ← 310°	
								GS 3.00 TCH 45	
		1.1		1.5 NM		2.9 NM		6.1 NM	
CATEGORY	A		B		C		D		
LPV DA	1589-½ 200 (300-½)								
LNAV/ VNAV DA	1825-1 436 (500-1)								
LNAV MDA	1780-½ 391 (400-½)							1780-1 391 (400-1)	
CIRCLING	1840-1 449 (500-1)		1860-1 469 (500-1)		1860-1½ 469 (500-1½)		1960-2 569 (600-2)		

NDB BBB
239

APP CRS
148°

Rwy Idg	4000
TDZE	1039
Apt Elev	1039

NDB RWY 14
BENSON MUNI (BBB)



If local altimeter setting not recieved, use Appleton altimeter setting and increase all MDAs 40 feet.

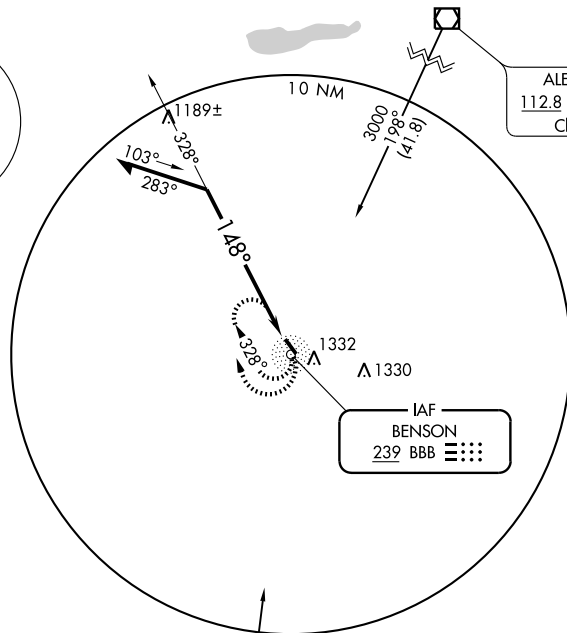
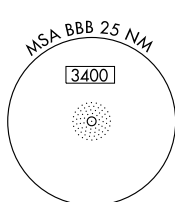



ANA

MISSED APPROACH: Climbing right turn to 2700 in BBB NDB holding pattern.

AWOS-3
239

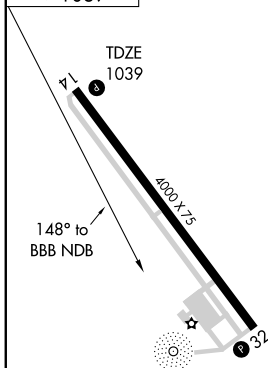
MINNEAPOLIS CENTER
125.5 323.1

UNICOM
122.8 (CTAF) **L**

ALEXANDRIA
112.8 AXN 
Chn 75

2318

ELEV 1039



2700 002° (17)
ARDUE
DWN 52.9

2700
(21.2)
CLAPS
DWN 37

Remain
within 10 NM

NDB

2700

-148-

CATEGORY

A

B

C

D

S-14

1700-1 661 (700-1)

NA

CIRCLING

1740-1 701 (800-1)

NA

REIL Rlys 14 and 32 **L**MIRL Rwy 14-32 **L**

WAAS CH 49210 W14A	APP CRS 138°	Rwy Idg TDZE Apt Elev	4000 1039 1039
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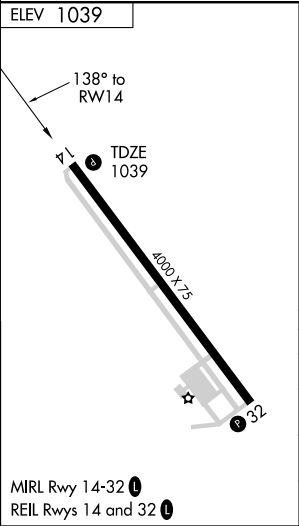
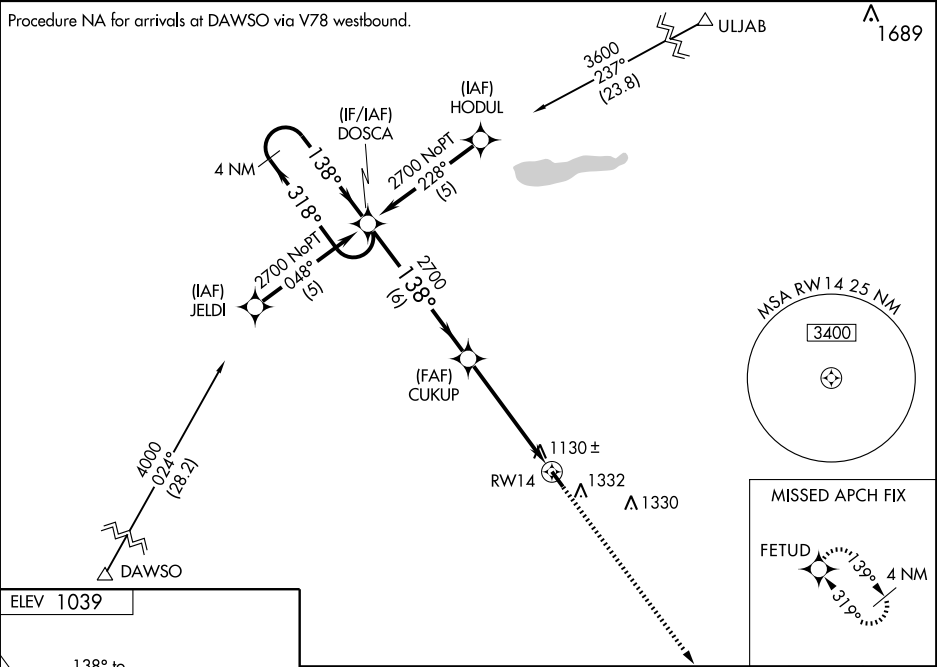
RNAV (GPS) RWY 14
BENSON MUNI (BBB)

⚠ For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F).
⚠ DME/DME RNP -0.3 NA.
Baro-VNAV and VDP NA when using Appleton altimeter setting.
When local altimeter setting not received, use Appleton altimeter setting and increase all DA and MDA 40 feet, increase Circling Cat B visibility ¼ mile.

MISSED APPROACH: Climb to 2700 direct FETUD and hold.

AWOS-3 239	MINNEAPOLIS CENTER 125.5 323.1	UNICOM 122.8 (CTAF) 0
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Procedure NA for arrivals at DAWSO via V78 westbound.



4 NM Holding Pattern		DOSCA	CUKUP	2700	FETUD
2700		318°	138°	2700	
GS 3.00°		TCH 40			
		6 NM	3.5 NM	1.5	
CATEGORY	A	B	C	D	
LPV DA	1382-1¼	343 (400-1¼)		NA	
LNAV/VNAV DA	1426-1½	387 (400-1½)		NA	
LNAV MDA	1540-1	501 (600-1)		NA	
CIRCLING	1740-1	701 (800-1)		NA	

WAAS CH 99710 W32A	APP CRS 319°	Rwy Idg TDZE Apt Elev	4000 1039 1039
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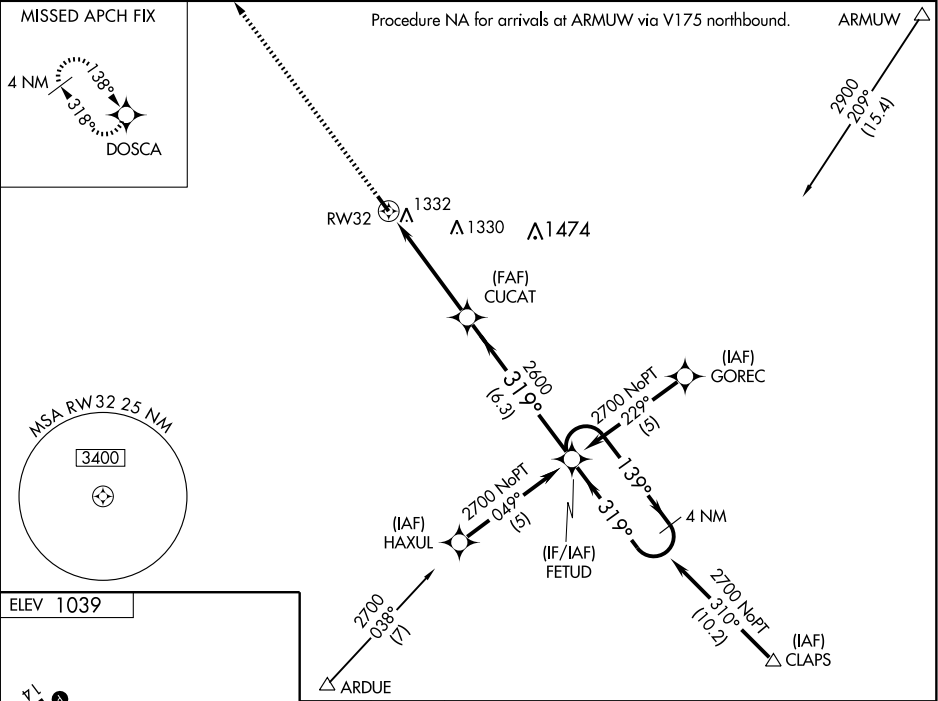
RNAV (GPS) RWY 32
BENSON MUNI (BBB)

⚠ For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F).

⚠ DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. Baro-VNAV NA when using Appleton altimeter setting. When local altimeter setting not received, use Appleton altimeter setting and increase all DA and MDA 40 feet, increase Circling Cat B visibility ¼ mile.

MISSED APPROACH: Climb to 2700 direct DOSCA and hold.

AWOS-3 239	MINNEAPOLIS CENTER 125.5 323.1	UNICOM 122.8 (CTAF) 0
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2700

DOSCA

CUCAT

FETUD

4 NM Holding Pattern

139°

319°

2700

GS 3.00°

TCH 41

4.7 NM

6.3 NM

RW32

2600

TDZE 1039

319° to RW32

MIRL Rwy 14-32

REIL Rwy 14 and 32

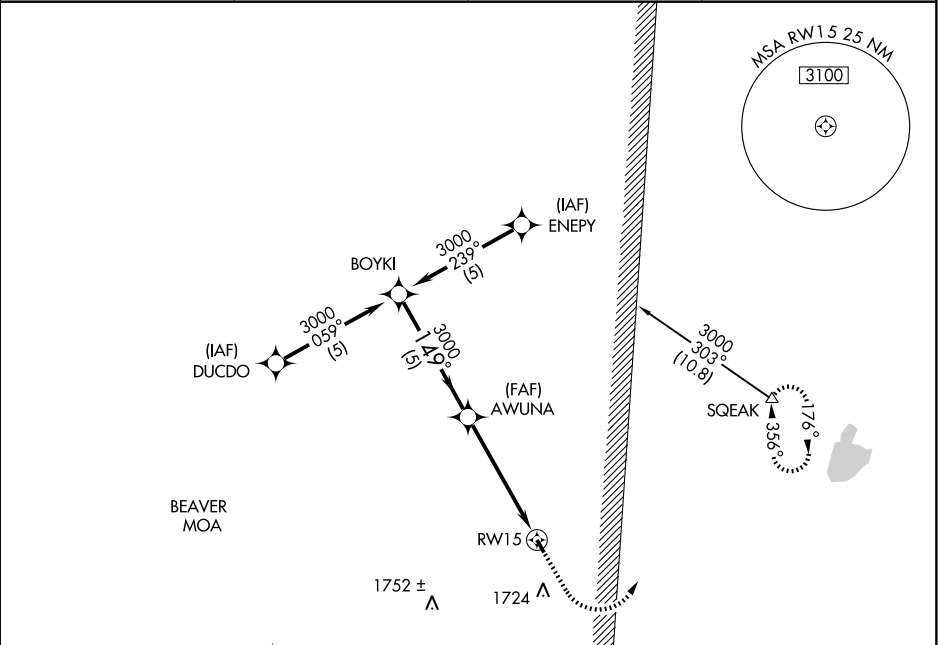
CATEGORY	A	B	C	D
LPV DA	1426-1½	387 (400-1½)		NA
LNAV/ VNAV DA	1710-2½	671 (700-2½)		NA
LNAV MDA	1700-1	661 (700-1)		NA
CIRCLING	1740-1	701 (800-1)		NA

APP CRS	Rwy Idg	3100
149°	TDZE	1349
	Apt Elev	1349

GPS RWY 15

BIGFORK MUNI (FOZ)

<div><div>T</div><div>NA</div></div>		MISSED APPROACH: Climb to 2200 then climbing left turn to 5000 direct SQUEAK and hold.	
AWOS-3 345	MINNEAPOLIS CENTER 127.9 281.45	GCO 121.725	CTAF 122.9 0

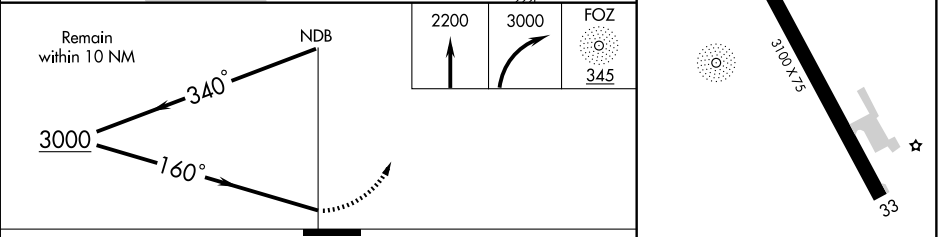
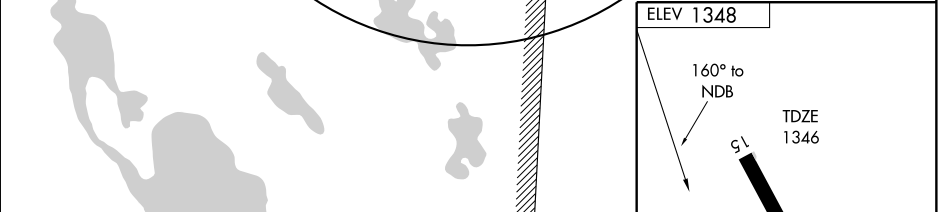
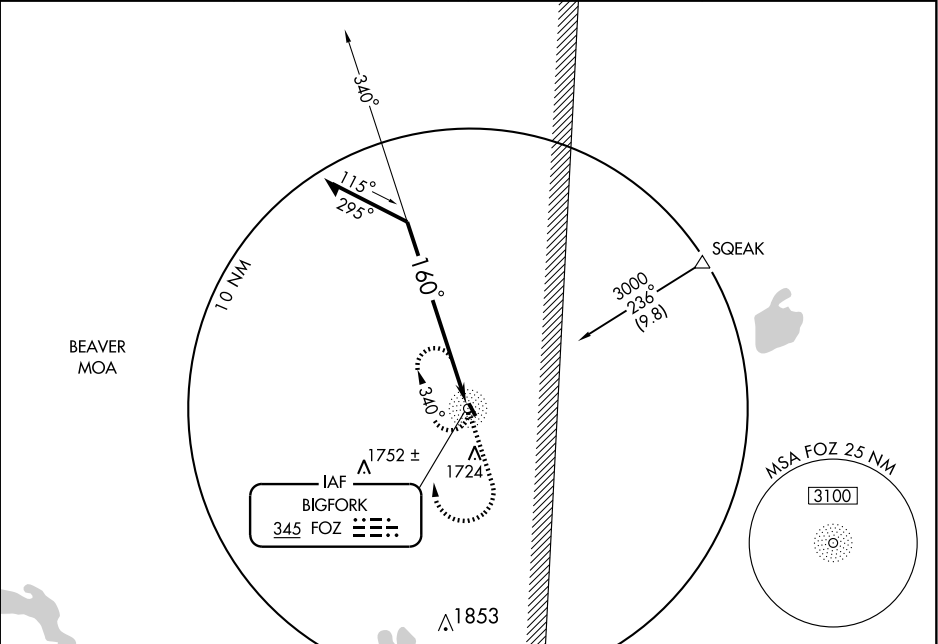


<p>BOYKI</p> <p>AWUNA</p> <p>3000</p> <p>149°</p> <p>3000</p> <p>149°</p> <p>3.04°</p> <p>TCH 40</p> <p>5 NM</p> <p>3.9 NM</p> <p>1.1</p> <p>1.1 NM to RW15</p> <p>RW15</p> <p>5000</p> <p>SQUEAK</p> <p>△</p>				
CATEGORY	A	B	C	D
S-15	1740-1	391 (400-1)	NA	
CIRCLING	1780-1	1800-1	NA	
	431 (500-1)	451 (500-1)		

NDB RWY 15
BIGFORK MUNI (FOZ)

NDB FOZ	APP CRS	Rwy Idg	3100
345	160°	TDZE	1346
		Apt Elev	1348

▼ Procedure not authorized when BEAVER MOA is active.		MISSED APPROACH: Climb to 2200 then climbing right turn to 3000 direct FOZ NDB and hold.	
▲ NA			
AWOS-3	MINNEAPOLIS CENTER	GCO	CTAF
345	127.9 281.45	121.725	122.9 0



CATEGORY	A	B	C	D
S-15	1840-1	494 (500-1)	NA	
CIRCLING	1840-1	494 (500-1)	NA	

MIRL Rwy 15-33 0

NDB SBU
332

APP CRS
330°

Rwy Idg	3399
TDZE	1107
Apt Elev	1107

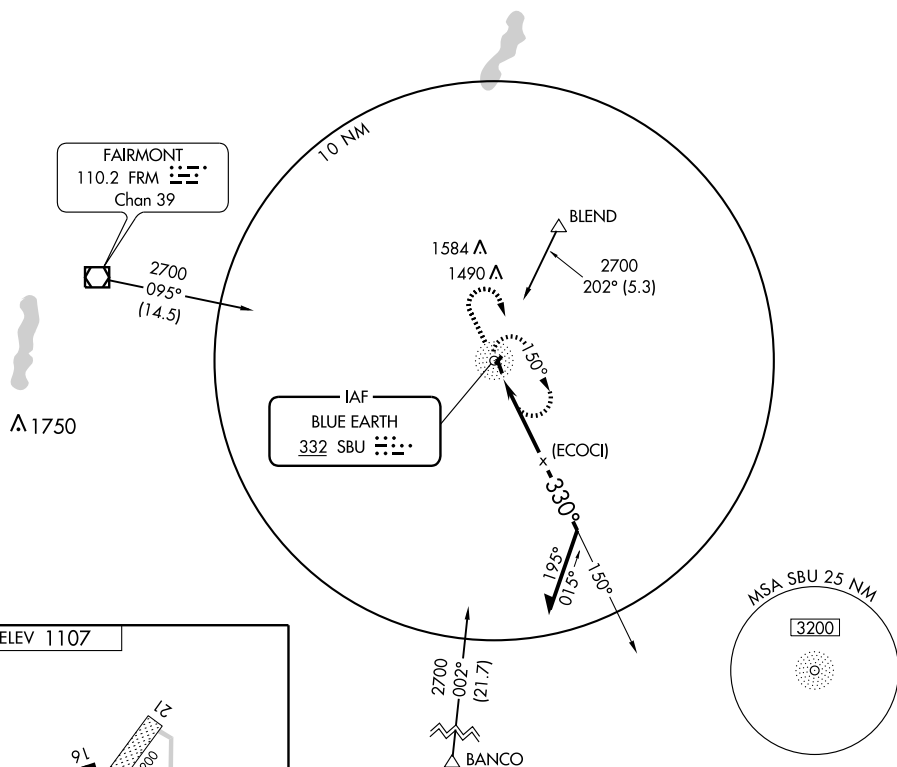
NDB or GPS RWY 34
BLUE EARTH MUNI (SBU)

A NA Use Fairmont altimeter setting.

MISSED APPROACH: Climb to 2700 then right turn direct SBU NDB and hold.

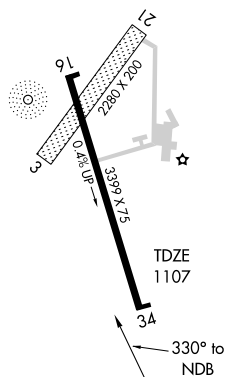
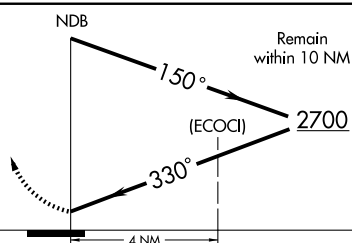
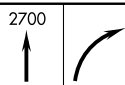
MINNEAPOLIS CENTER
127.75 257.7

UNICOM
122.8 (CTAF) **L**



NC-1. 17 DEC 2009 to 14 JAN 2010

ELEV 1107

MIRL Rwy 16-34 

CATEGORY	A	B	C	D
S-34	1700-1	593 (600-1)	1700-1½ 593 (600-1½)	NA
CIRCLING	1700-1	593 (600-1)	1700-1½ 593 (600-1½)	NA

LOC I- LER	APP CRS	Rwy Idg	6500
<u>109.7</u>	340°	TDZE	1232
		Apt Elev	1232

ILS or LOC RWY 34

T If local altimeter setting not received, use Airkin altimeter setting and increase DA 52 feet and increase all MDAs 60 feet.

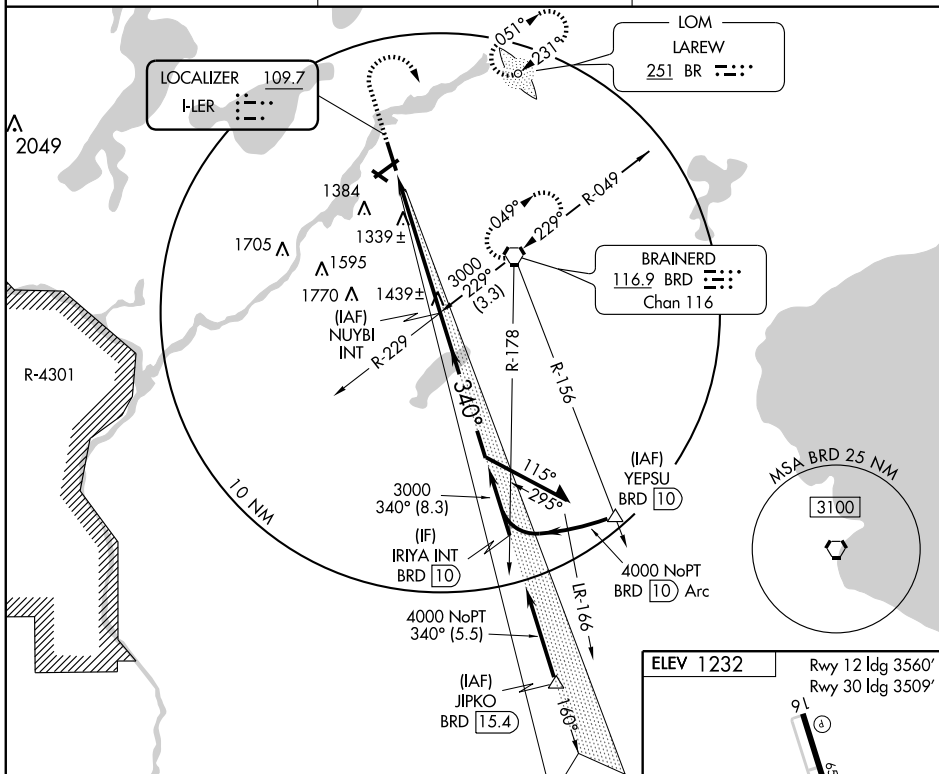
MALSR

MISSED APPROACH: Climb to 1700 then climbing right turn to 3000 direct BRD VORTAC and hold.

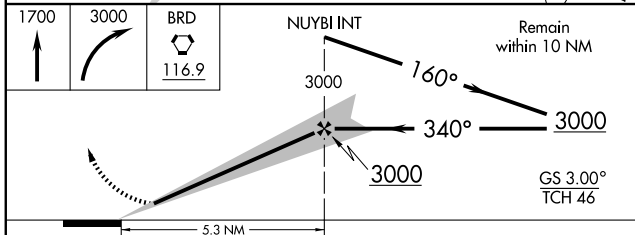
ASOS
126,775

MINNEAPOLIS CENTER
118.05 239.0

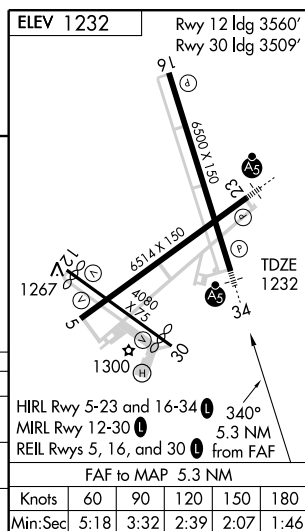
UNICOM
122.7 (CTAF) **L**



NC-1. 17 DEC 2009 to 14 JAN 2010



CATEGORY	A	B	C	D
S-ILS 34	1432-½ 200 (200-½)			
S-LOC 34	1600-½ 368 (400-½)			1600-¾ 368 (400-¾)
CIRCLING	1760-1 528 (600-1)		1760-1½ 528 (600-1½)	1800-2 568 (600-2)



LOM BR <u>251</u>	APP CRS 231°	Rwy Idg 6514 TDZE 1224 Apt Elev 1232
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NDB RWY 23

BRAINERD LAKES RGNL (BRD)

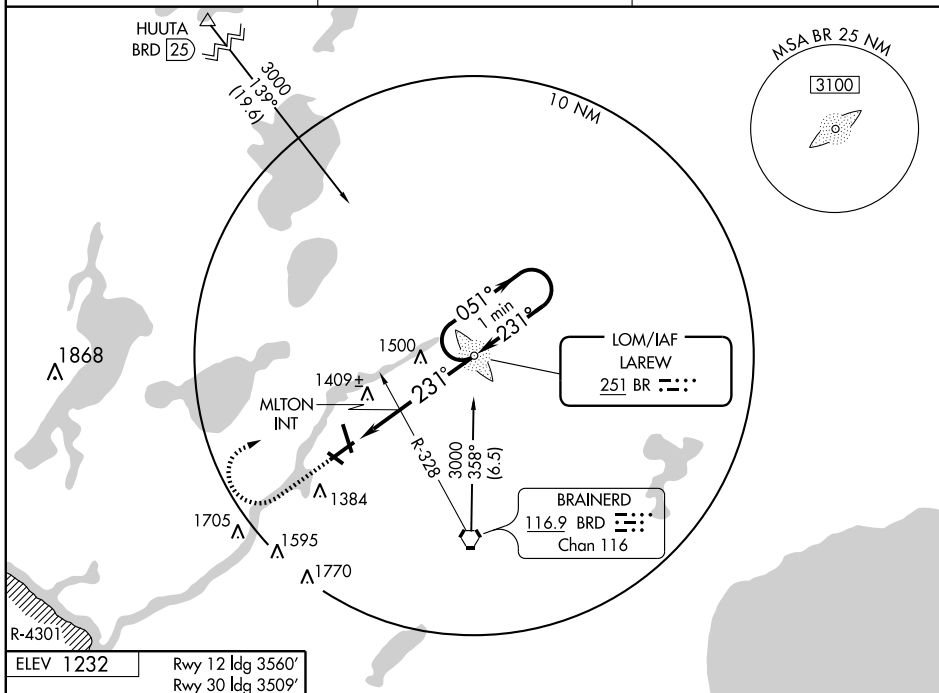
T If local altimeter setting not received, use Aitkin
A NA Muni-Steve Kurtz Field altimeter setting and
increase all MDAs 60 feet.



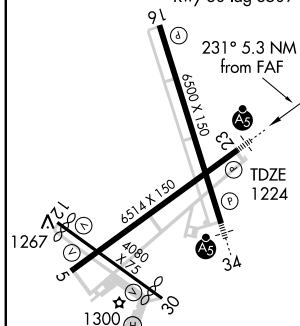
MISSED APPROACH: Climb to 3000 then right turn direct BR LOM and hold.

ASOS
126.775

MINNEAPOLIS CENTER
118.05 239.0

UNICOM
122.7 (CTAF) **L**

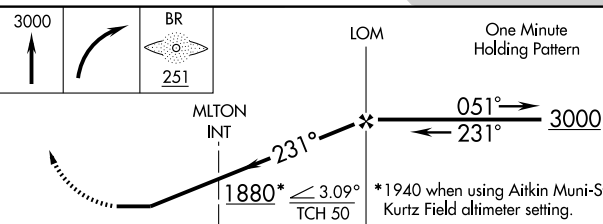
ELEV 1232	Rwy 12 ldg 3560'
	Rwy 30 ldg 3509'

HIRL Rwy 5-23 and 16-34 **L**MIRL Rwy 12-30 **L**

REIL Rwy 5, 16, and 30 L

FAF to MAP 5.3 NM

Knots	60	90	120	150	180
Min:Sec	5:18	3:32	2:39	2:07	1:46



*1940 when using Aitkin Muni-Steve Kurtz Field altimeter setting.

	2 NM		3.3 NM			
CATEGORY	A		B		C	D
S- 23	1880-¾ 656 (700-¾)				1880-1¼ 656 (700-1¼)	1880-1¾ 656 (700-1¾)
CIRCLING	1880-1 648 (700-1)				1880-1¾ 648 (700-1¾)	1880-2 648 (700-2)
MLTON FIX MINIMUMS						
S- 23	1720-¾ 496 (500-¾)				1720-1¼ 496 (500-1¼)	
CIRCLING	1760-1 528 (600-1)				1760-1½ 528 (600-1½)	1800-2 568 (600-2)

RNAV (GPS) RWY 5

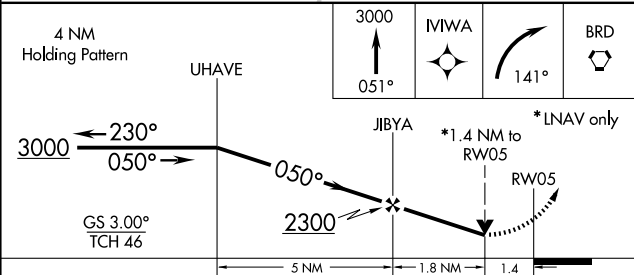
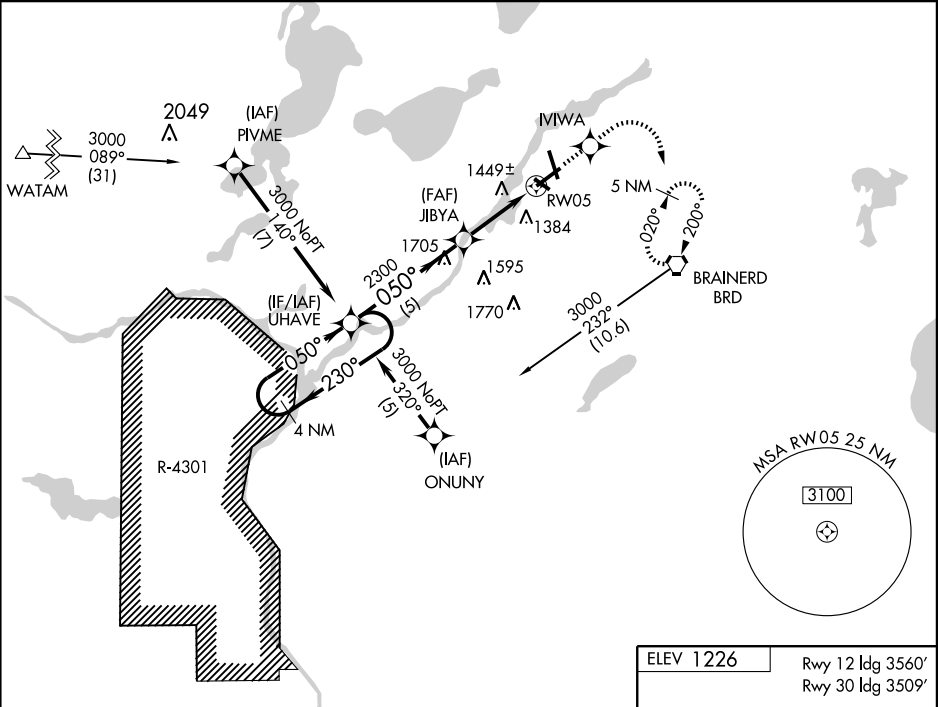
BRainerd LAKES RGNL (BRD)

APP CRS	Rwy Idg	6514
050°	TDZE	1223
	Apt Elev	1226

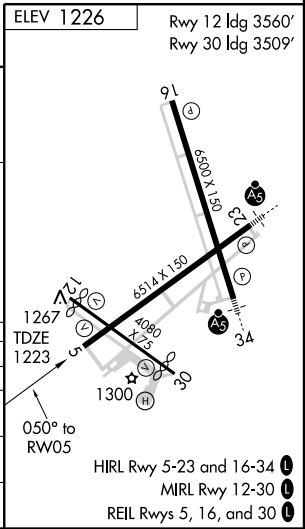
Baro-VNAV NA below -17°C (2°F).
GPS or **RNP-0.3** required. **DME/DME RNP-0.3** NA.
Holding in lieu of procedure turn NA when R-4301 is active.

MISSED APPROACH: Climb to 3000 via 051° course to **IVIWA** WP then right turn via 141° course to **BRD** VORTAC and hold.

ASOS 126.775	MINNEAPOLIS CENTER 118.05 239.0	UNICOM 122.7(CTAF) 0
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CATEGORY	A	B	C	D
GLS PA DA	NA			
RNAV/VNAV DA	1700-1¾ 477 (500-1¾)			
RNAV MDA	1700-1 477 (500-1)	1700-1¾ 477 (500-1¾)	1700-1½ 477 (500-1½)	1780-2 554 (600-2)
CIRCLING	1760-1¾ 534 (600-1¾)			



APP CRS
122°

Rwy Idg
TDZE
Apt Elev

3560
1225
1232

RNAV (GPS) RWY 12

BRAINERD LAKES RGNL (BRD)

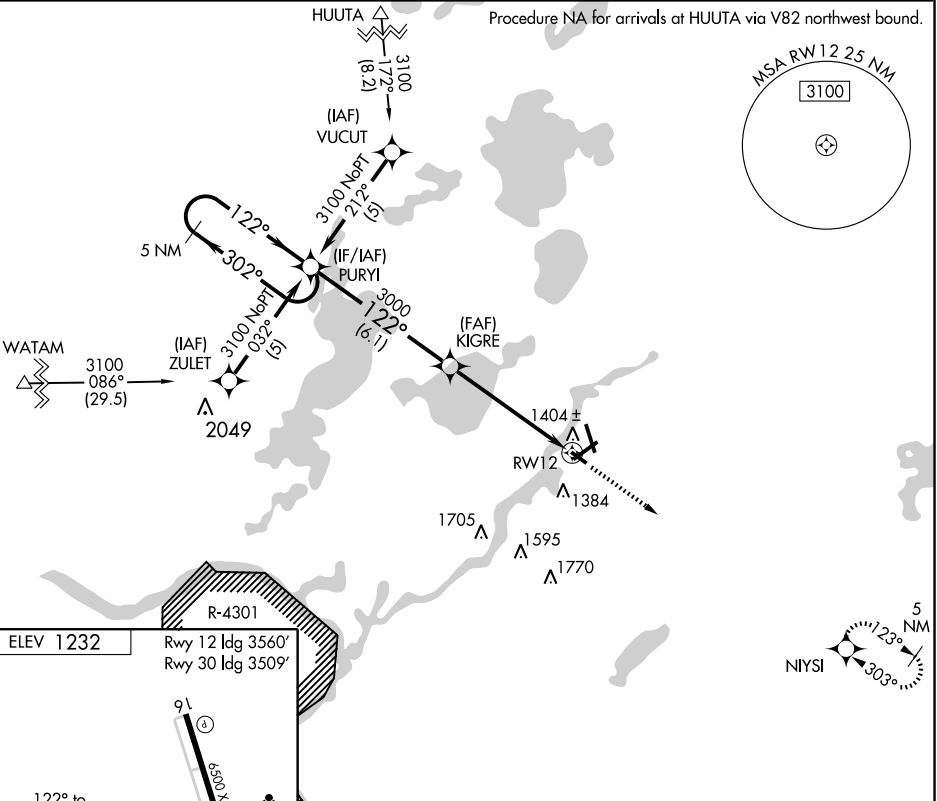
▼

▲

If local altimeter setting not received, use Aitkin Muni-Steve Kurtz Field altimeter setting and increase all MDAs 60 feet.
DME/DME RNP-0.3 NA.
Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 3300 direct NIYSI and hold.

ASOS 126.775	MINNEAPOLIS CENTER 118.05 239.0	UNICOM 122.7 (CTAF) 0
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5 NM Holding Pattern PURYI

3100 ← 302° 122° →

VGSI and descent angles not coincident.

KIGRE

3000 3.04° ≥ TCH 40

RWY 12

3300 NIYSI

CATEGORY	A	B	C	D
LNAV MDA	1660-1 435 (500-1)	1660-1½ 435 (500-1½)	1660-1½ 435 (500-1½)	1660-1½ 435 (500-1½)
CIRCLING	1760-1 528 (600-1)	1760-1½ 528 (600-1½)	1760-1½ 528 (600-1½)	1800-2 568 (600-2)

HIRL Rwy 5-23 and 16-34

MIRL Rwy 12-30

REIL Rwy 5, 16, and 30

WAAS CH 82502 W23A	APP CRS 231°	Rwy Idg TDZE Apt Elev	6514 1224 1232
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RNAV (GPS) RWY 23
BRAINERD LAKES RGNL (BRD)

⚠ For inoperative MALS, increase LPV all CATS visibility to 1 mile.

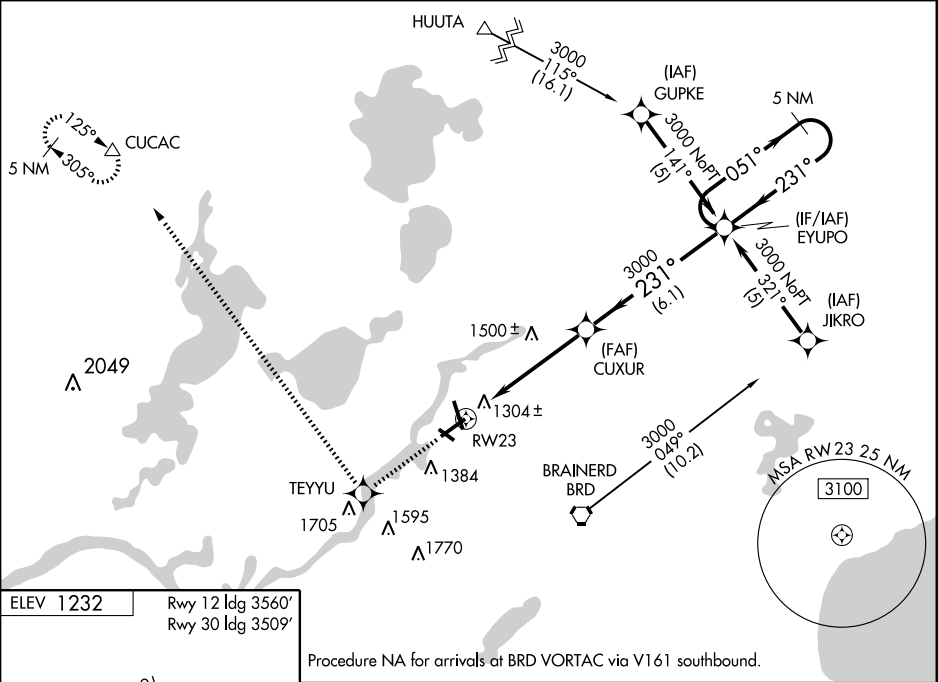
⚠ For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). DME/DME RNP -0.3 NA. VDP and Baro-VNAV NA when using Aitkin Muni-Steve Kurtz Field altimeter setting. If local altimeter setting not received, use Aitkin Muni-Steve Kurtz Field altimeter setting and increase all DAs 52 feet and all MDAs 60 feet.

MALS

A5

MISSED APPROACH: Climb to 3300 direct TEYU and via 321° track to CUCAC and hold.

ASOS 126.775	MINNEAPOLIS CENTER 118.05 239.0	UNICOM 122.7 (CTAF) 0
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ELEV 1232

Rwy 12 Idg 3560'

Rwy 30 Idg 3509'

Procedure NA for arrivals at BRD VORTAC via V161 southbound.

3300 ↑	TEYU ✦	321° track	CUCAC △	CUXUR ✖	EYUPO	5 NM Holding Pattern
*LNAV only						
RW23 ↻		*1.5 NM to RW23		231° → ← 231° 3000		
1.5 NM		3.8 NM		6.1 NM		
GS 3.00° TCH 50						

CATEGORY	A		B		C	D
LPV DA	1501-½		277 (300-½)			
LNAV/ VNAV DA	1573-¾		349 (400-¾)			
LNAV MDA	1760-½ 536 (600-½)		1760-1 536 (600-1)		1760-1½ 536 (600-1½)	1800-2 568 (600-2)
CIRCLING	1760-1 528 (600-1)		1760-1½ 528 (600-1½)			

WAAS CH 70711 W34A	APP CRS 340°	Rwy Idg 6500 TDZE 1232 Apt Elev 1232
--	------------------------	---

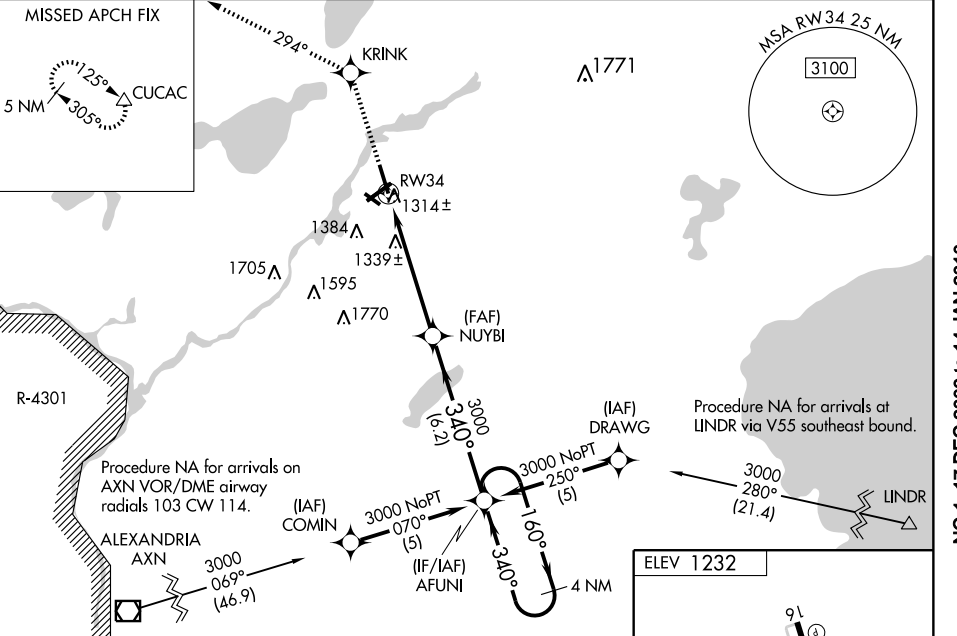
W For inoperative MALS/R, increase LNAV Cat D visibility to 1½ mile.
Baro-VNAV NA when using Aikini altimeter setting.

A For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). DME/DME RNP-0.3 NA.
When local altimeter setting not received, use Aikini altimeter setting and increase all DA 52 feet and all MDA 60 feet, increase LNAV/VNAV all Cats and LNAV Cat C and D visibility ½ mile. VDP NA when using Aikini altimeter setting.
For inoperative MALS/R when using Aikini altimeter setting, increase LNAV Cat D visibility to 1½ mile.

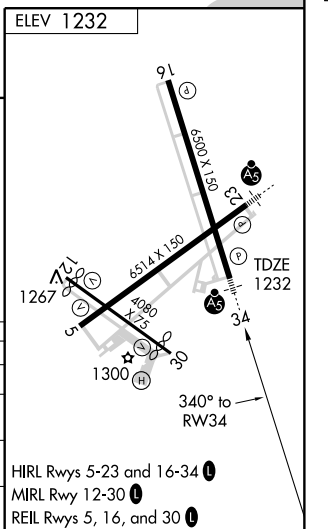
MALS/R

MISSED APPROACH: Climb to 3300 direct KRINK and via 294° track to CUCAC and hold.

ASOS 126.775	MINNEAPOLIS CENTER 118.05 239.0	UNICOM 122.7 (CTAF) 1
------------------------	---	---------------------------------



3300	KRINK	294° track	CUCAC	NUYBI	AFUNI	4 NM Holding Pattern
*LNAV only						
1 NM 4.3 NM 6.2 NM						
CATEGORY	A	B	C	D		
LPV DA	1432-½ 200 (200-½)					
LNAV/VNAV DA	1584-¾ 352 (400-¾)					
LNAV MDA	1600-½ 368 (400-½)				1600-1 368 (400-1)	
CIRCLING	1760-1 528 (600-1)		1760-1½ 528 (600-1½)		1800-2 568 (600-2)	



NC-1. 17 DEC 2009 to 14 JAN 2010

VORTAC BRD <u>116.9</u> Chan 116	APP CRS 118°	Rwy Idg 3560 TDZE 1225 Apt Elev 1226
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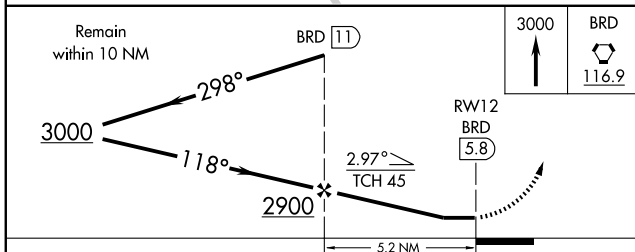
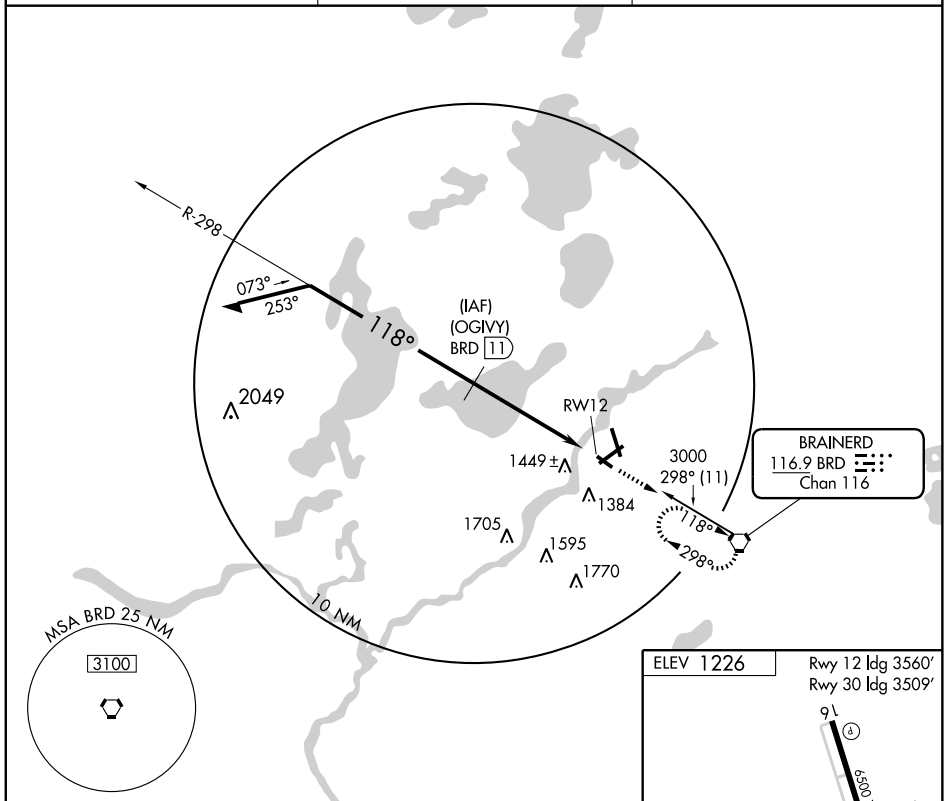
VOR/DME or GPS RWY 12

BRAINERD LAKES RGNL (BRD)

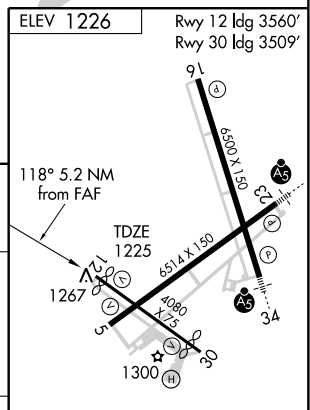


MISSED APPROACH: Climb to 3000 direct BRD VORTAC and hold.

ASOS 126.775	MINNEAPOLIS CENTER 118.05 239.0	UNICOM 122.7 (CTAF) 0
------------------------	---	---------------------------------




CATEGORY	A	B	C	D
S-12	1700-1	475 (500-1)	1700-1¼ 475 (500-1¼)	1700-1½ 475 (500-1½)
CIRCLING	1760-1	534 (600-1)	1760-1½ 534 (600-1½)	1780-2 554 (600-2)


HIRL Rwy 5-23 and 16-34 **L**MIRL Rwy 12-30 **L**

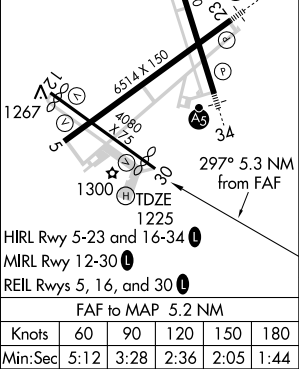
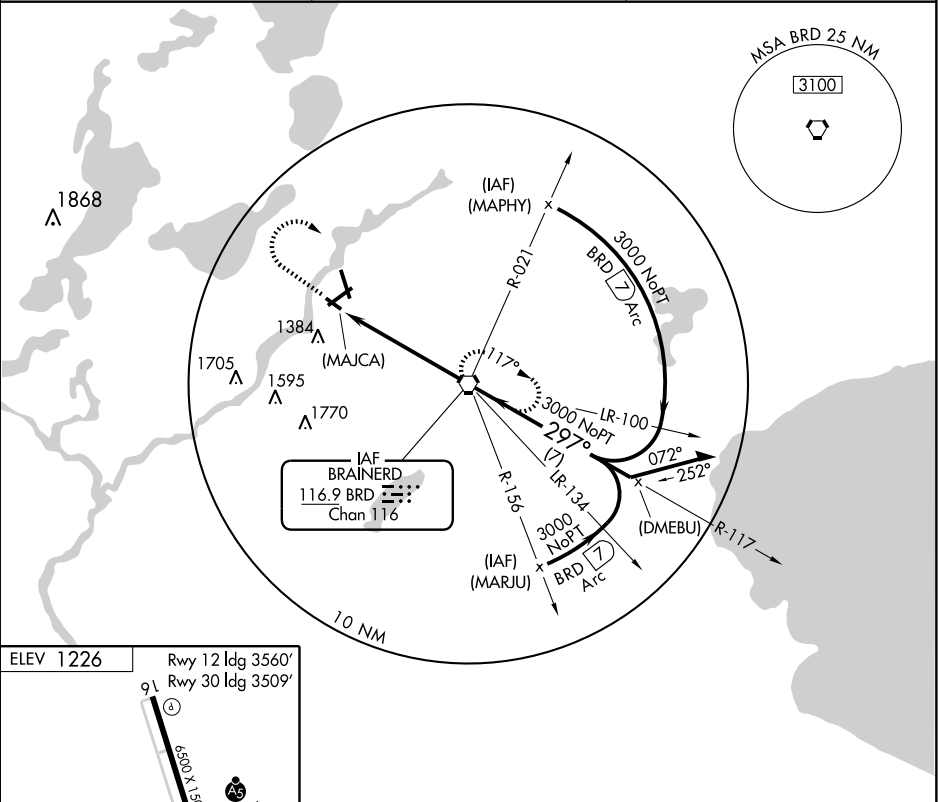
REIL Rwy 5, 16, and 30 L





VORTAC BRD	APP CRS	Rwy Idg	3509
116.9	297°	TDZE	1225
Chan 116		Apt Elev	1226

VOR or GPS RWY 30
BRainerd Lakes RGNL (BRD)

	MISSED APPROACH: Climb to 3000 then right turn direct BRD VORTAC and hold.
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ASOS 126.775	MINNEAPOLIS CENTER 118.05 239.0	UNICOM 122.7 (CTAF) 
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 3000	 BRD 116.9 	VORTAC 117° 297° 3000 Remain within 10 NM		
(MAJCA) BRD 5.2 	≤ 3.05° TCH 45°			
0.1	5.2 NM			
CATEGORY	A	B	C	D
S-30	1660-1	435 (500-1)	1660-1¼ 435 (500-1¼)	1660-1½ 435 (500-1½)
CIRCLING	1760-1	534 (600-1)	1760-1½ 534 (600-1½)	1780-2 554 (600-2)

AGUDE ONE ARRIVAL

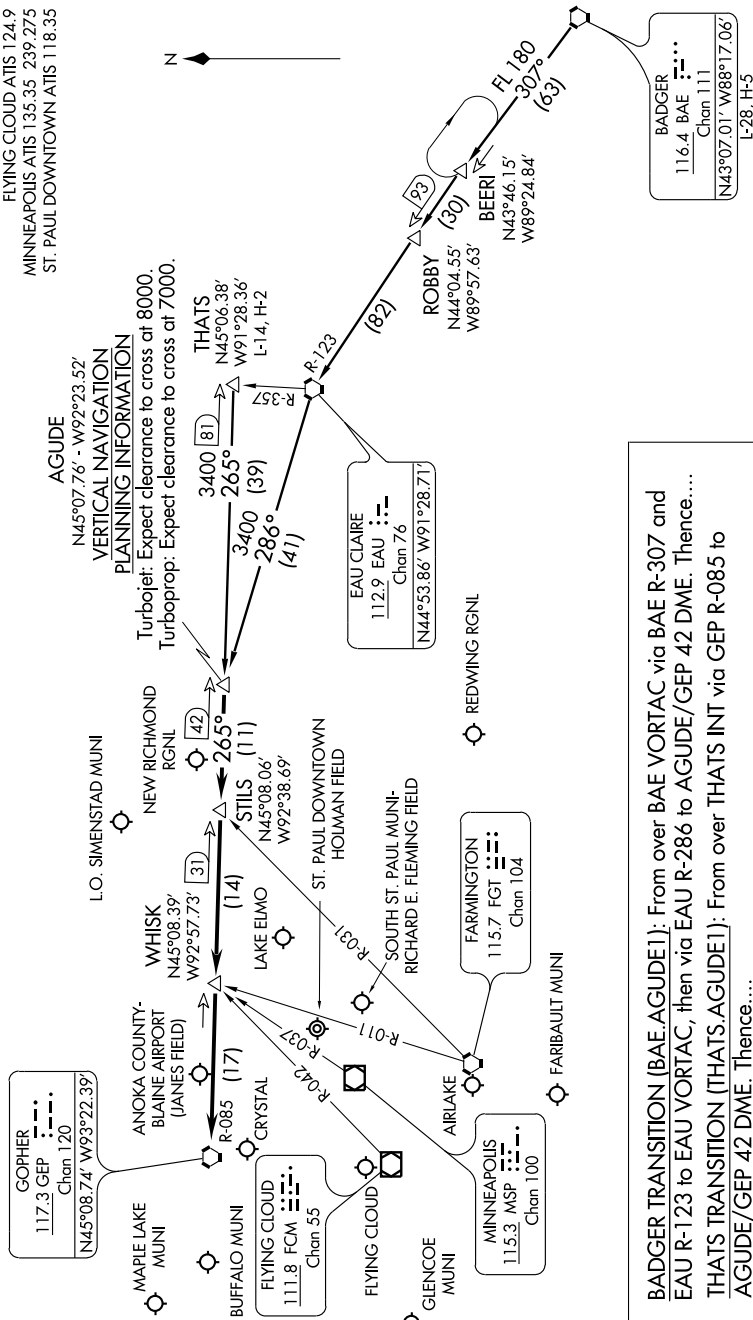
ST-263 (FAA)

MINNEAPOLIS-ST. PAUL, MINNESOTA

MINNEAPOLIS APP CON
126.95 335.5
ANOKA COUNTY ATIS 120.625
CRYSTAL ATIS 124.475
FLYING CLOUD ATIS 124.9
MINNEAPOLIS ATIS 135.35 239.275
ST. PAUL DOWNTOWN ATIS 118.35

AGUDE
N45°07.76' - W92°23.52'
VERTICAL NAVIGATION
PLANNING INFORMATION

Turbopjet: Expect clearance to cross at 8000.
Turboprop: Expect clearance to cross at 7000.



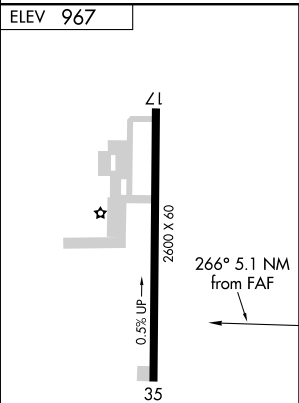
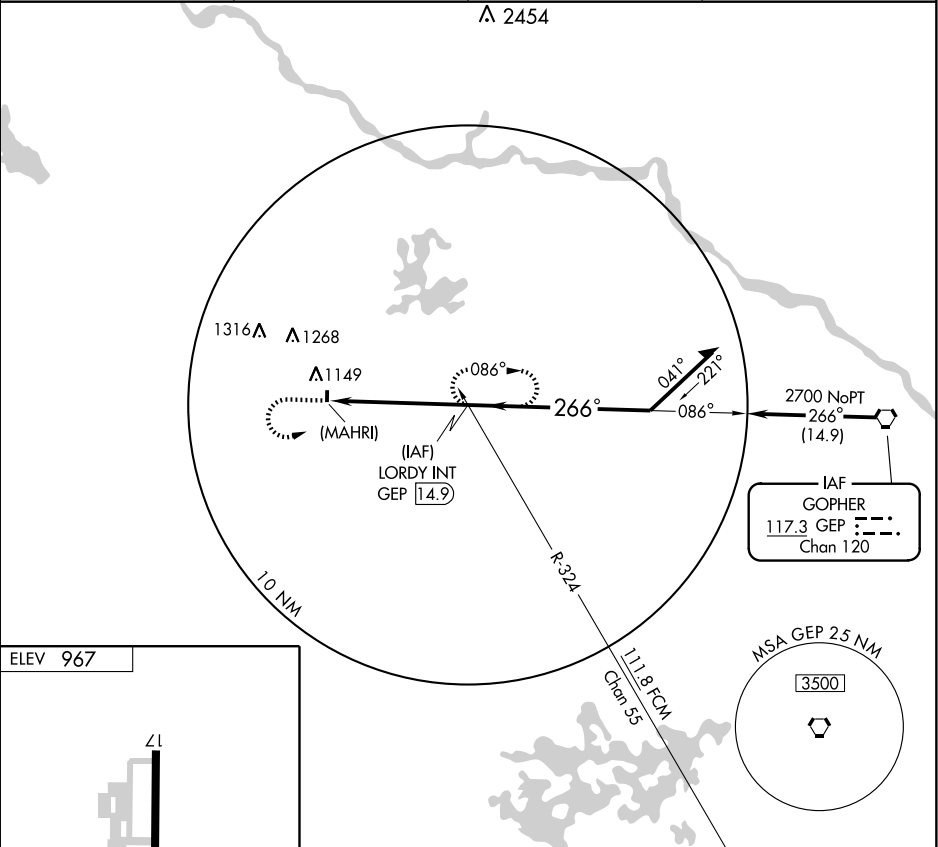
BADGER TRANSITION [BAE AGUDE1]: From over BAE VORTAC via BAE R-307 and EAU R-123 to EAU VORTAC, then via EAU R-286 to AGUDE/GEF 42 DME. Thence....
THATS TRANSITION [THATS.AGUDE1]: From over THATS INT via GEP R-085 to AGUDE/GEF 42 DME. Thence....
....From over AGUDE/GEF 42 DME via the GEP R-085 to GEP VORTAC, then expect radar vector to final approach course.

NOTE: DME and RADAR required.
NOTE: Chart not to scale.

VOR or GPS-B
BUFFALO MUNI (CFE)

VORTAC GEP 117.3 Chan 120	APP CRS 266°	Rwy Idg TDZE Apt Elev	N/A N/A 967
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NA Use Princeton altimeter setting.		MISSED APPROACH: Climb to 2000 then climbing left turn to 2700 via GEP R-266 to LORDY Int and hold.	
AWOS-3 120.45	MINNEAPOLIS APP CON 126.5 357.4	GCO 121.725	UNICOM 122.8 (CTAF)



LIRL Rwy 17-35					
FAF to MAP 5.1 NM					
Knots	60	90	120	150	180
Min:Sec	5:06	3:24	2:33	2:02	1:42

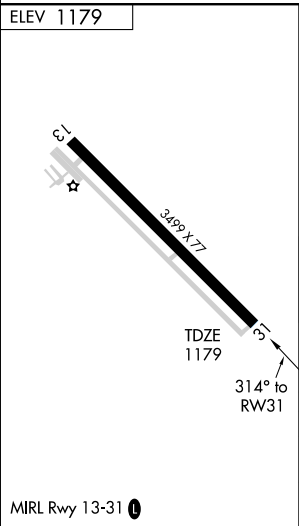
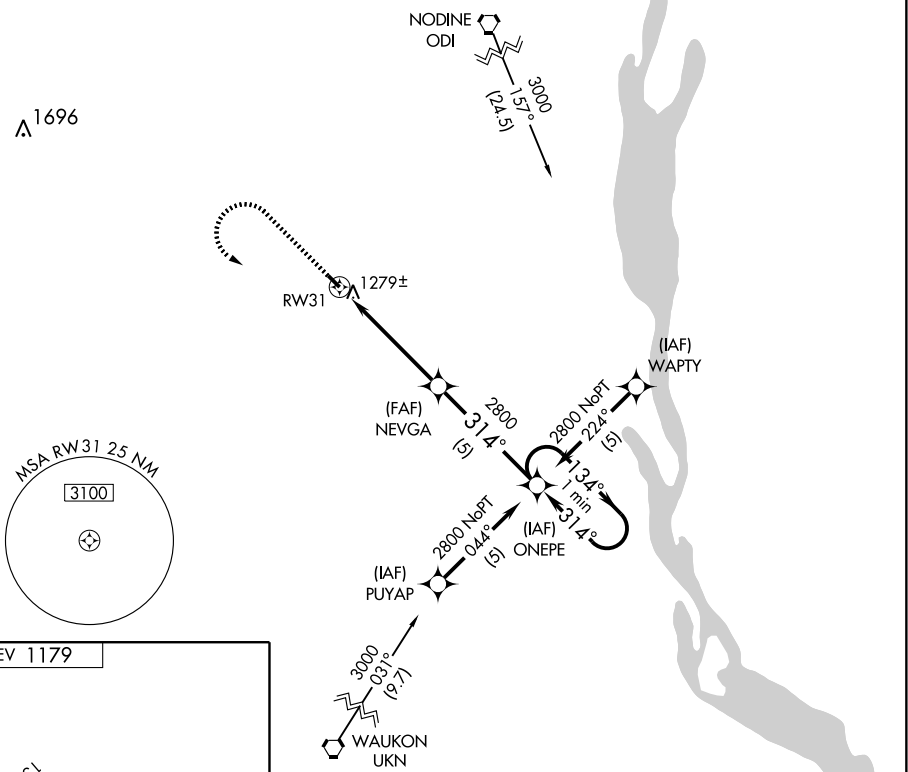
<div>2000 ↑</div>		<div>2700 GEP R-266</div>		<div>LORDY INT</div>		
<div>(MAHRI) GEP 20</div>		<div>LORDY INT GEP 14.9</div>		<div>Remain within 10 NM</div>		
<div>266°</div>		<div>2700</div>		<div>086°</div>		
<div>5.1 NM</div>		<div>2700</div>		<div>266°</div>		
CATEGORY	A		B		C	D
CIRCLING	1560-1		593 (600-1)		1560-1½ 593 (600-1½)	NA

APP CRS	Rwy Idg	3499
314°	TDZE	1179
	Apt Elev	1179

GPS RWY 31

CALEDONIA/HOUSTON COUNTY (CHU)

NA Use La Crosse, WI altimeter setting.	MISSED APPROACH: Climb to 2500 then climbing left turn to 2800 direct ONEPE WP and hold.
MINNEAPOLIS CENTER 128.6 363.0	CTAF 122.9 0

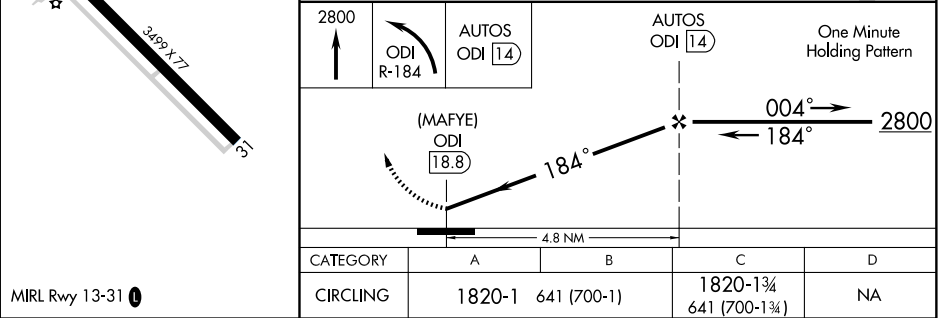
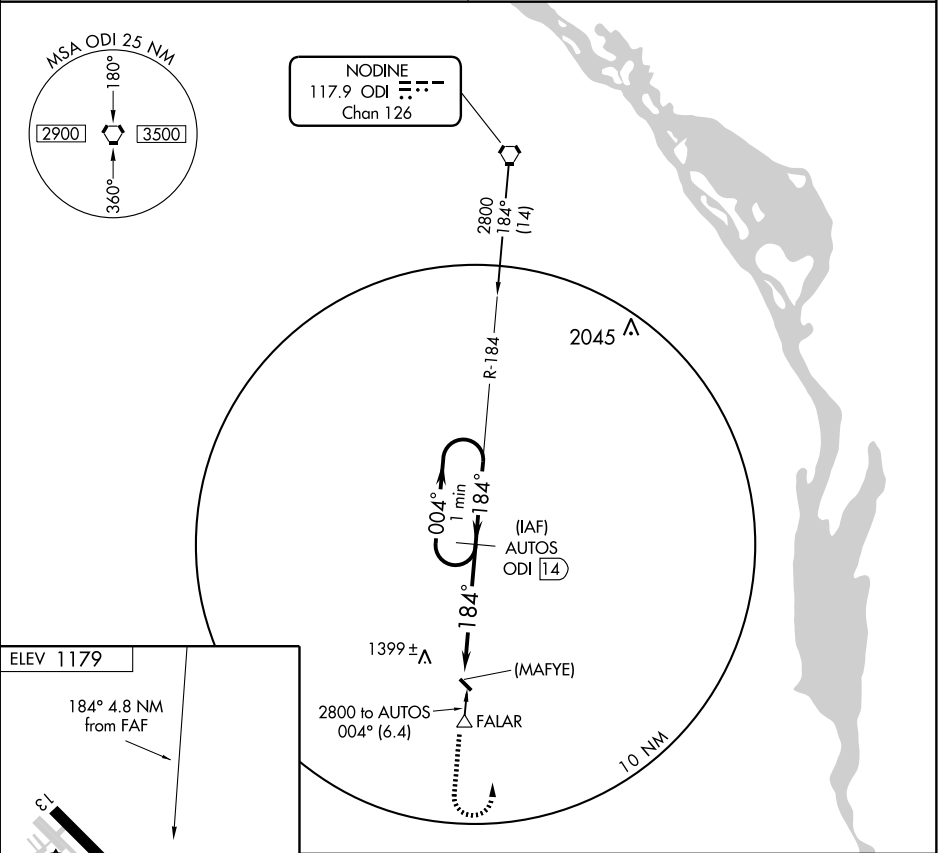


<div><div>2500 ↑</div><div>2800 ↶</div><div>ONEPE ✱</div><div>NEVGA</div><div>ONEPE</div><div>One Minute Holding Pattern</div></div>				
<div><div>RW31</div><div>314°</div><div>2800</div><div>134°</div><div>2800</div><div>5 NM</div><div>5 NM</div></div>				
CATEGORY	A	B	C	D
S-31	1660-1	481 (500-1)	1660-1¼ 481 (500-1¼)	NA
CIRCLING	1820-1	641 (700-1)	1820-1¾ 641 (700-1¾)	NA

VORTAC ODI 117.9 Chan 126	APP CRS 184°	Rwy Idg TDZE Apt Elev N/A N/A 1179
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VOR/DME or GPS-A
CALEDONIA/HOUSTON COUNTY (CHU)

NA Use La Crosse, WI altimeter setting.	MISSED APPROACH: Climb to 2800 then left turn via ODI R-184 to AUTOS/14 DME and hold.
MINNEAPOLIS CENTER 128.6 363.0	CTAF 122.9

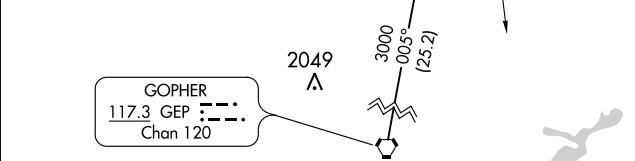
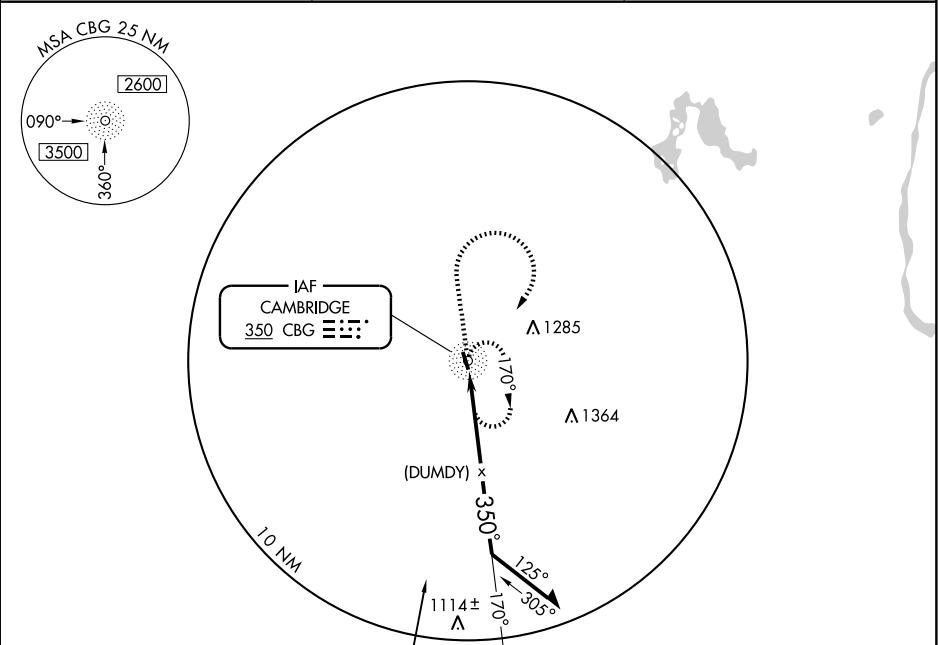


NDB CBG	APP CRS	Rwy Idg TDZE	4000
350	350°	Apt Elev	945

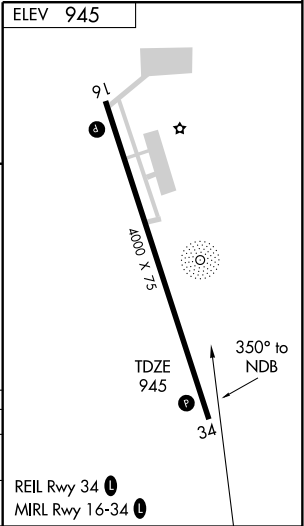
NDB or GPS RWY 34
CAMBRIDGE MUNI (CBG)

NA	MISSED APPROACH: Climb to 2500 then right turn direct CBG NDB and hold.
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AWOS-3 121.125	MINNEAPOLIS CENTER 121.05 397.9	UNICOM 122.8 (CTAF) 0
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CATEGORY	A	B	C	D
S-34	1480-1	535 (600-1)	1480-1½ 535 (600-1½)	NA
CIRCLING	1480-1	535 (600-1)	1480-1½ 535 (600-1½)	NA



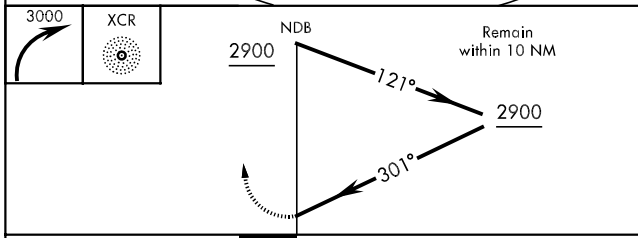
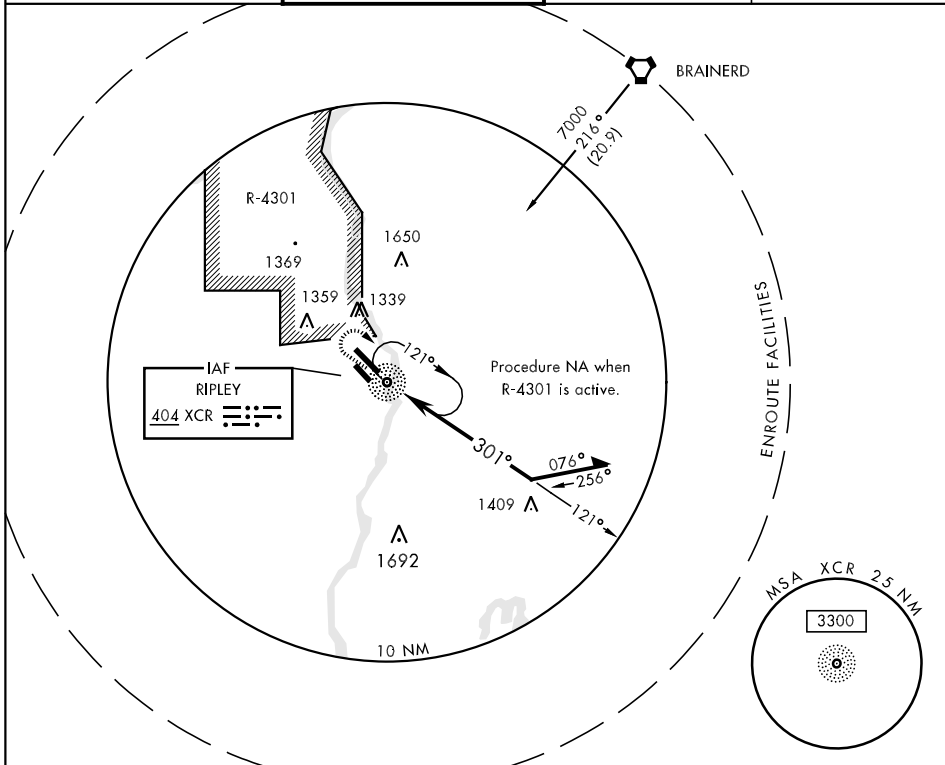
NDB XCR <u>404</u>	APCH CRS 301°	Rwy Idg 6100 TDZE 1149 Arpt Elev 1152
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AL-5226 [USA]

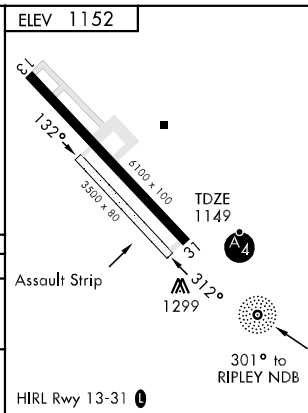
RAY S. MILLER AAF (KRYM)

	When local altimeter setting not received, use Little Falls altimeter setting and increase all MDA 40'. Inop table does not apply to CAT C.		MISSED APPROACH: Climbing right turn to 3000 in XCR NDB holding pattern.
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MINNEAPOLIS CENTER 118.05 239.0	MILLER TOWER ★ 126.2 0 254.4 49.2	CLINC DEL 126.2	AWOS-3 148.35
------------------------------------	--------------------------------------	--------------------	------------------



CATEGORY	A	B	C	D
S-31	1760-3 ⁴ 611	(700-3 ⁴)	1760-1 ³ 611 (700-1 ³)	1760-2 611 (700-2)
CIRCLING	1760-1 608	(700-1)	1760-1 ³ 608 (700-1 ³)	1760-2 608 (700-2)



APCH CRS	Rwy Idg	6100
132°	TDZE	1152
	Arpt Elev	1152

AL-5226 [USA]

RAY S. MILLER AAF (KRYM)

TANA

DME/DME RNP-0.3 NA.

Visibility reduction by helicopters NA.

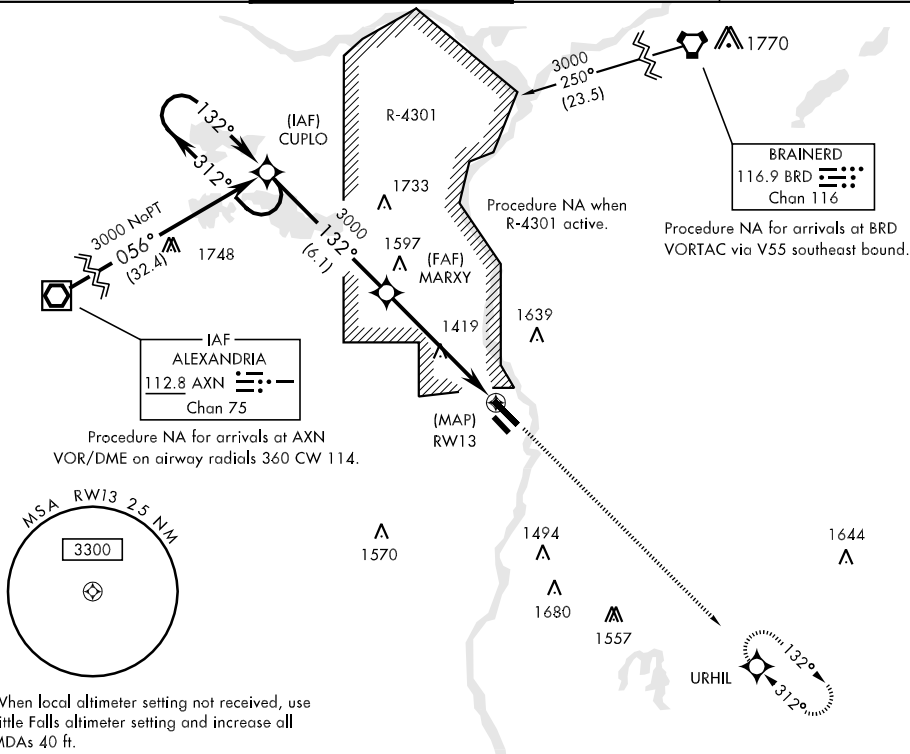
MISSED APPROACH: Climb to 3300 direct URHIL and hold.

MINNEAPOLIS CENTER
118.05 239.0

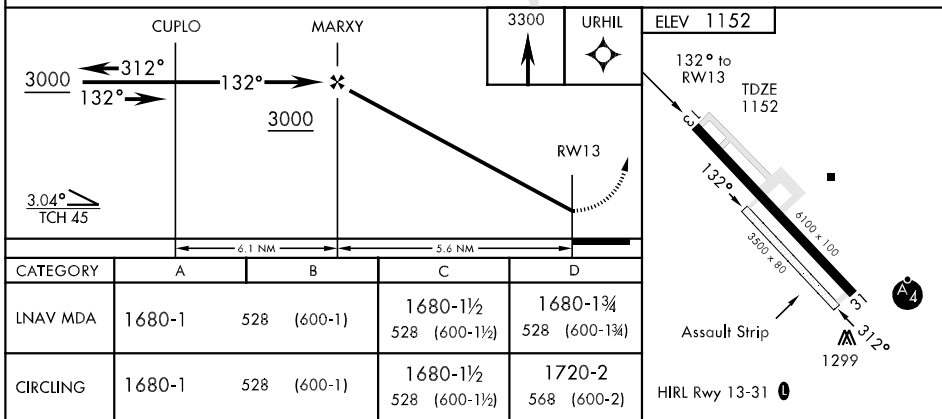
MILLER TOWER ★
254.4 126.2 49.2

CLNC DEL
126.2

AWOS-3
148.35



NC-1, 17 DEC 2009 to 14 JAN 2010



CAMP RIPLEY, MINNESOTA

46°05'N-94°21'W

RAY S. MILLER AAF (KRYM)

Orig 08157

APCH CRS **312°**
 Rwy Idg **6100**
 TDZE **1149**
 Arpt Elev **1152**

AL-5226 [USA]

RAY S. MILLER AAF (KRYM)



* When ALS inop, increase CAT D vis ¼ mile.

DME/DME RNP-0.3 NA.

MAIS

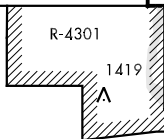
MISSED APPROACH: Climbing right turn to 3300
direct URHIL WPT and hold.

MINNEAPOLIS CENTER
118.05 239.0

MILLER TOWER ★
254.4 126.2 49.2

CLNC DEL
126.2

AWOS-3
148.35



1419
 A 1639

When local altimeter setting not received, use Little
 Falls altimeter setting and increase all MDAs 40 ft.

Procedure NA when R-4301 is active.

(MAP)
 RW31

1299



(FAF)
 PEGGO

1644



(IAF)
 GITI

3300

A 1570
 A 1680



1557

3200
 312°
 (6.1)

234°
 (8.5)

(IAF)
 URHIL

132°
 312°

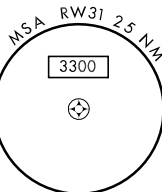
NoPT
 3300
 037°
 (15.6)

312°

A 1610

3300

(IAF)
 INONY



3300



VDP NA when using Little
 Falls altimeter setting.

URHIL

1.2 NM
 to
 RW31



RW31

PEGGO

312°
 3200

132°
 312°
 3300

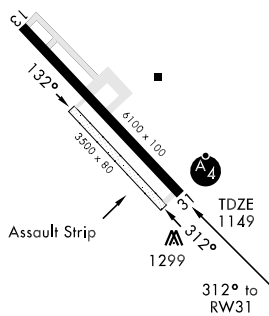
3.05°
 TCH 38

6.2 NM

6.1 NM

CATEGORY	A	B	C	D
LNAV MDA *	1580-¾ 431 (500-¾)	1580-1 431 (500-1)	1580-1¼ 431 (500-1¼)	
CIRCLING	1620-1 468 (500-1)	1640-1 488 (500-1)	1640-1½ 488 (500-1½)	1720-2 568 (600-2)

ELEV 1152



HIRL Rwy 13-31

TACAN RYM Chan 48	APCH CRS 128°	Rwy Idg 6100 TDZE 1152 Arpt Elev 1152
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AL-5226 [USA]

RAY S. MILLER AAF (KRYM)

T	When local altimeter setting not received, use Little Falls altimeter setting and increase all MDA 40'.
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MISSED APPROACH: Climb to 2000 then climbing right turn to 4200 via RYM TACAN R-220 to GARYE (15 DME) and hold.

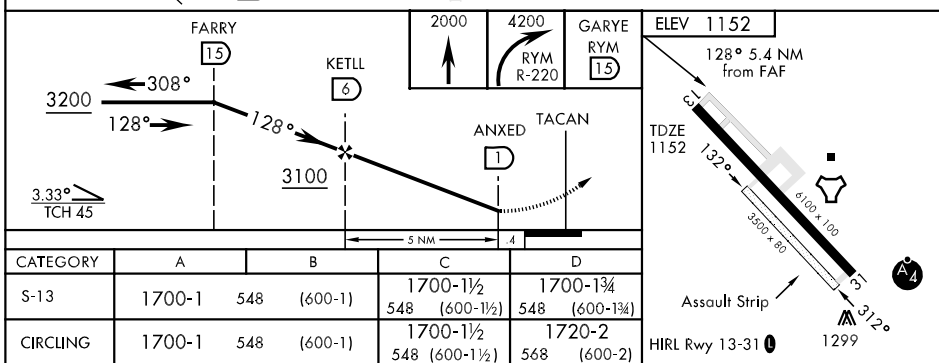
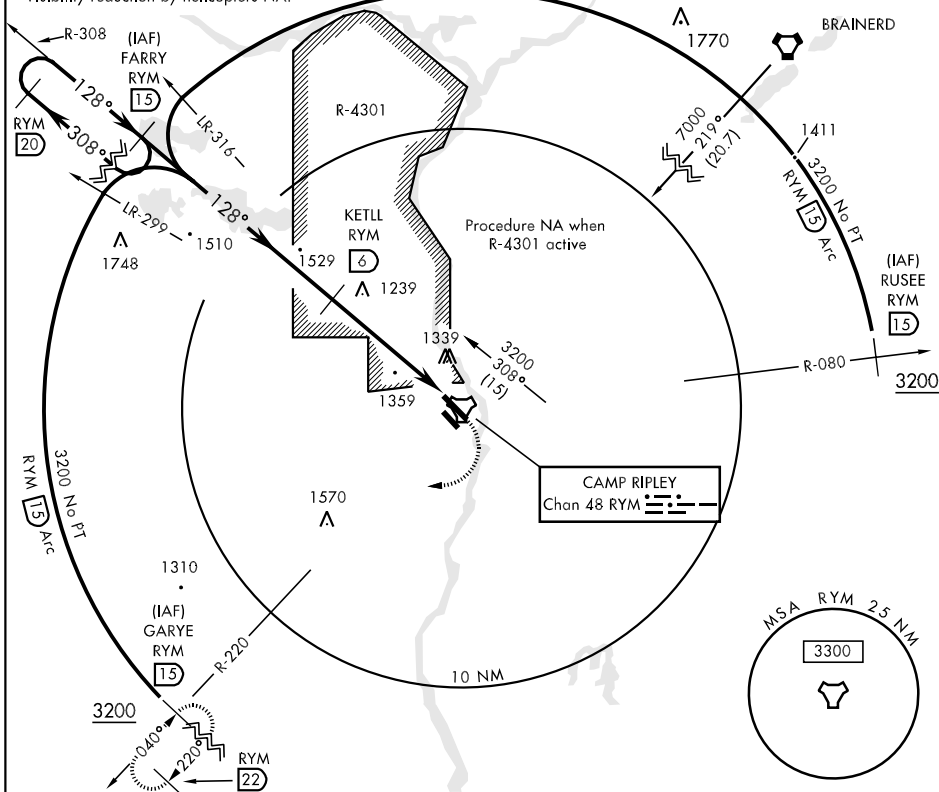
MINNEAPOLIS CENTER
118.05 239.0

MILLER TOWER ★
126.20 254.4 49.2

CLNC DEL
126.2

AWOS-3
148.35

Visibility reduction by helicopters NA.



CAMP RIPLEY, MINNESOTA

46°05'N-94°21'W

RAY S. MILLER AAF (KRYM)

Amdt 2 09211

TACANLBYM10

TACAN RYM	APCH CRS	Rwy Idg	6100
Chan 48	318°	TDZE	1149
		Arpt Elev	1152

AL-5226 [USA]

RAY S. MILLER AAF (KRYM)

T When local altimeter setting not received, use Little Falls altimeter setting and increase all MDA 40' and INCR S-31 CAT D vis $\frac{1}{4}$ mile.

A NA Inop table does not apply to CAT C.

MALSF

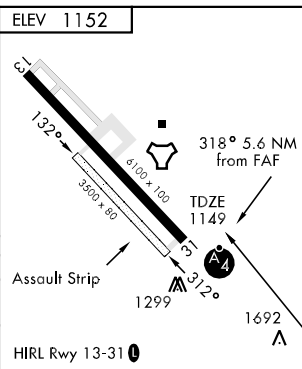
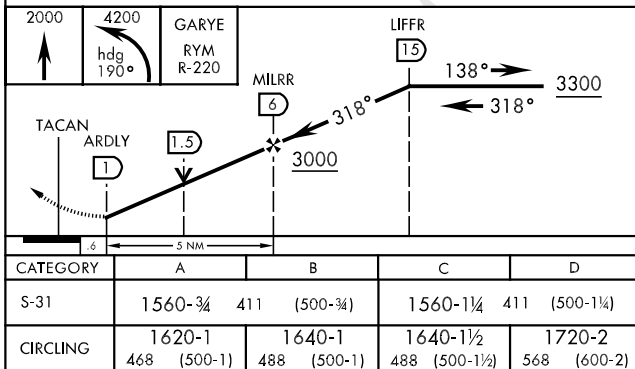
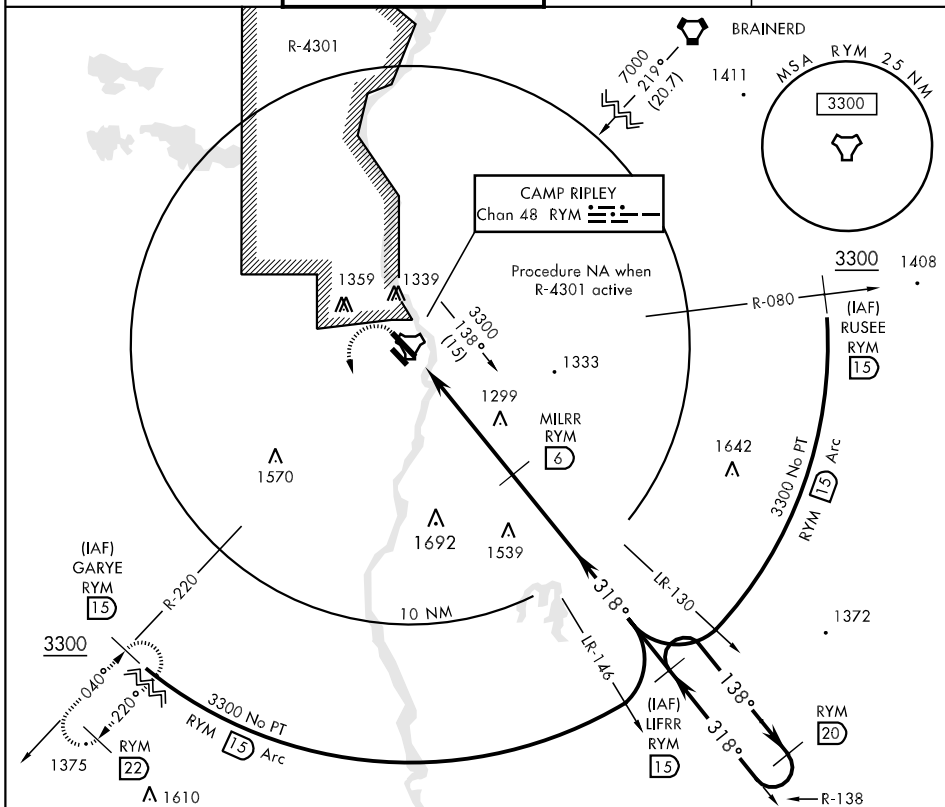
MISSED APPROACH: Climb to 2000 then climbing left turn to 4200 via hdg 190° and RYM R-220 to GARYE (15 DME) and hold.

MINNEAPOLIS CENTER
118.05 239.0

MILLER TOWER ★
126.2 254.4 49.2

CLNC DEL
126.2

AWOS-3
148.35



CAMP RIPLEY, MINNESOTA

46°05'N-94°21'W

RAY S. MILLER AAF (KRYM)

Amdt 2 09211

TACAN LPM 01

APP CRS	Rwy Idg	4648
115°	TDZE	1193
	Apt Elev	1193

RNAV (GPS) RWY 12

CANBY/MYERS FIELD (CNB)



DME/DME RNP-0.3 NA.
VDP NA when using Lac Qui Parle County altimeter setting.
If local altimeter setting not received, use Lac Qui Parle County
altimeter setting and increase all MDAs 60 feet.

MISSED APPROACH: Climbing right turn to 3700 direct EDAYU and hold.

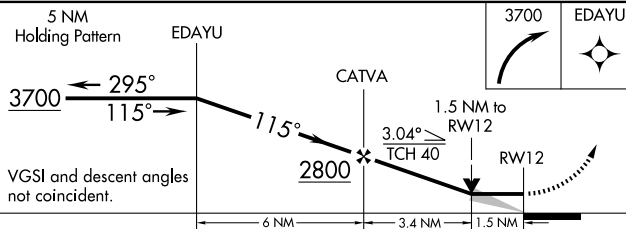
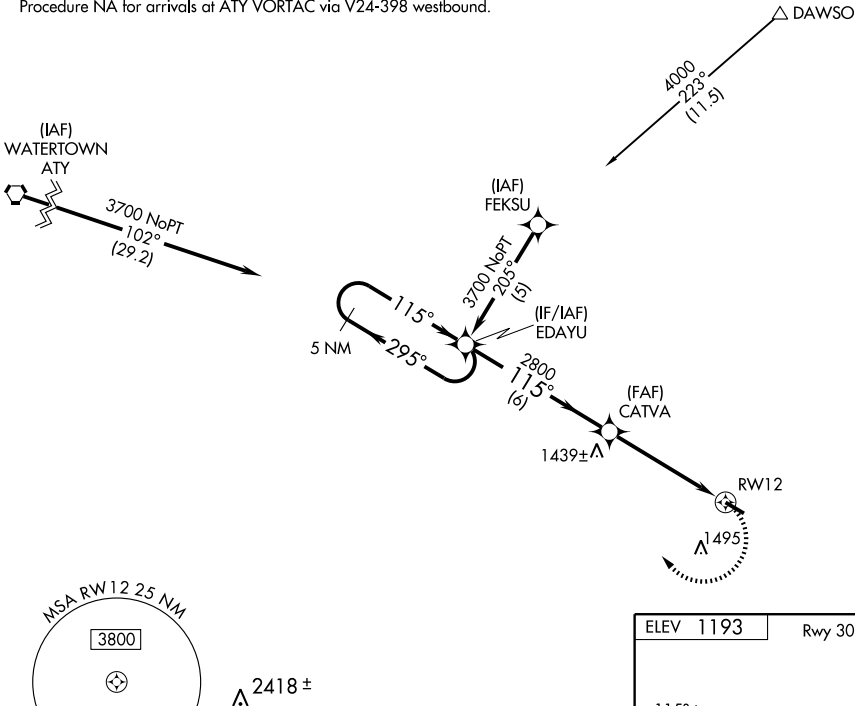
AWOS-3
118.575

MINNEAPOLIS CENTER
128.5 306.2

GCO
121.725

CTAF
122.9 **L**

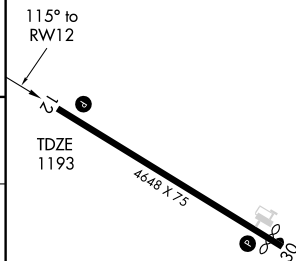
Procedure NA for arrivals at ATY VORTAC via V24-398 westbound.



CATEGORY	A	B	C	D
LNAY MDA	1700-1	507 (600-1)	NA	
CIRCLING	1700-1	507 (600-1)	NA	

ELEV 1193	Rwy 30 ldg 4409'
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Rwy 30 Idg 4409'

MIRL Rwy 12-30 **L**

REIL Rwy 12 and 30 L

▼

▲

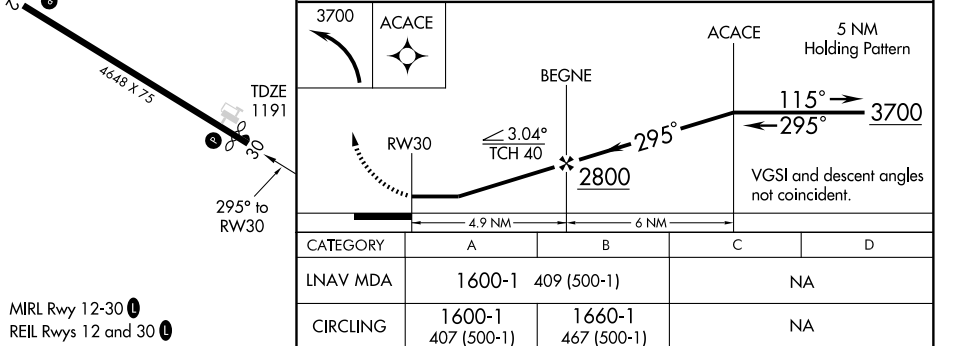
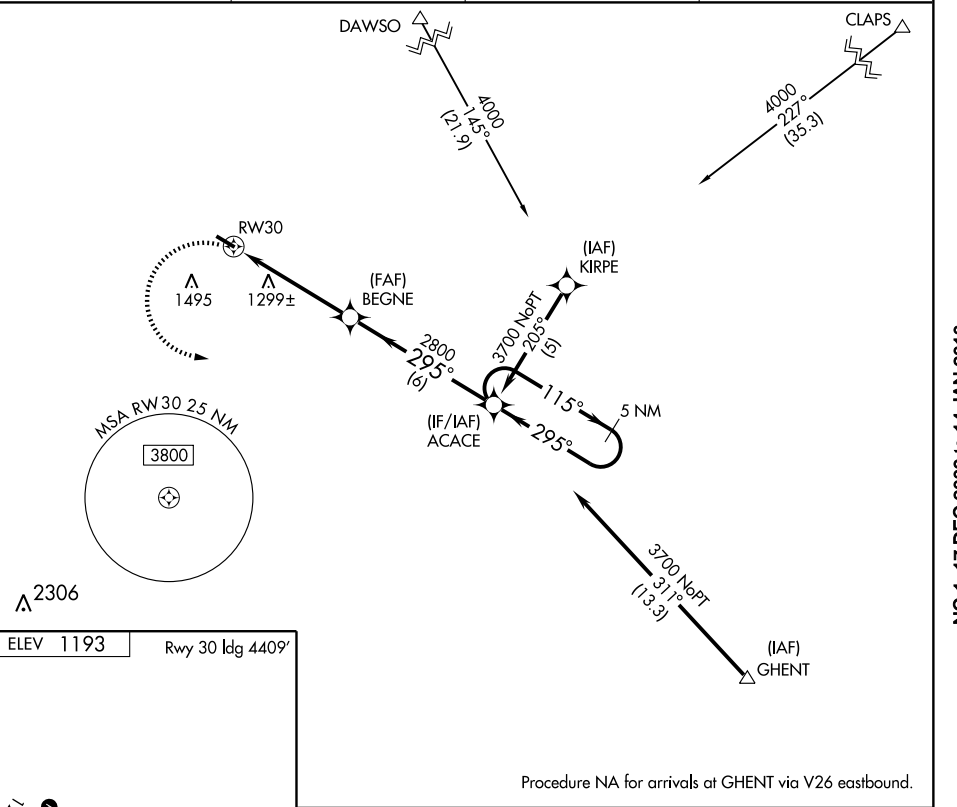
DME/DME RNP-0.3 NA.

Visibility reduction by helicopters NA.

If local altimeter setting not received, use Lac Qui Parle County altimeter setting and increase all MDAs 60 feet.

MISSED APPROACH: Climbing left turn to 3700 direct ACACE and hold.

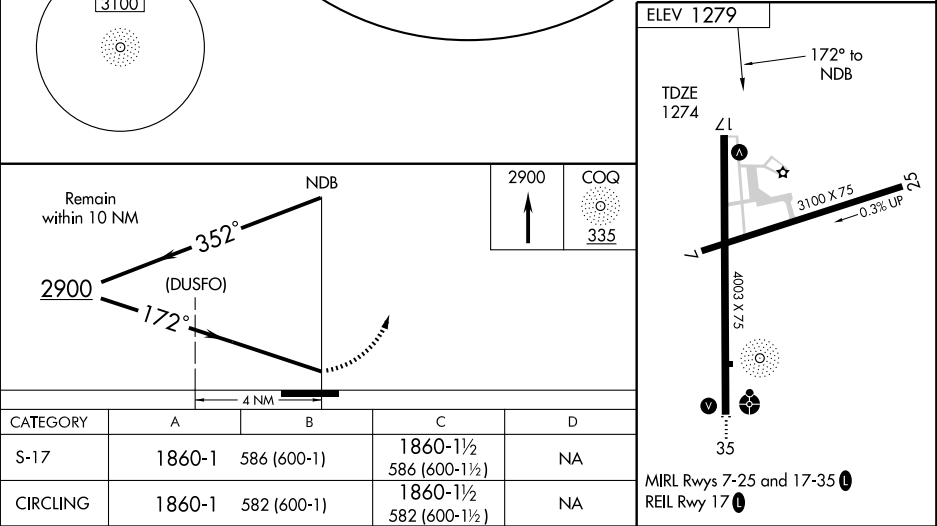
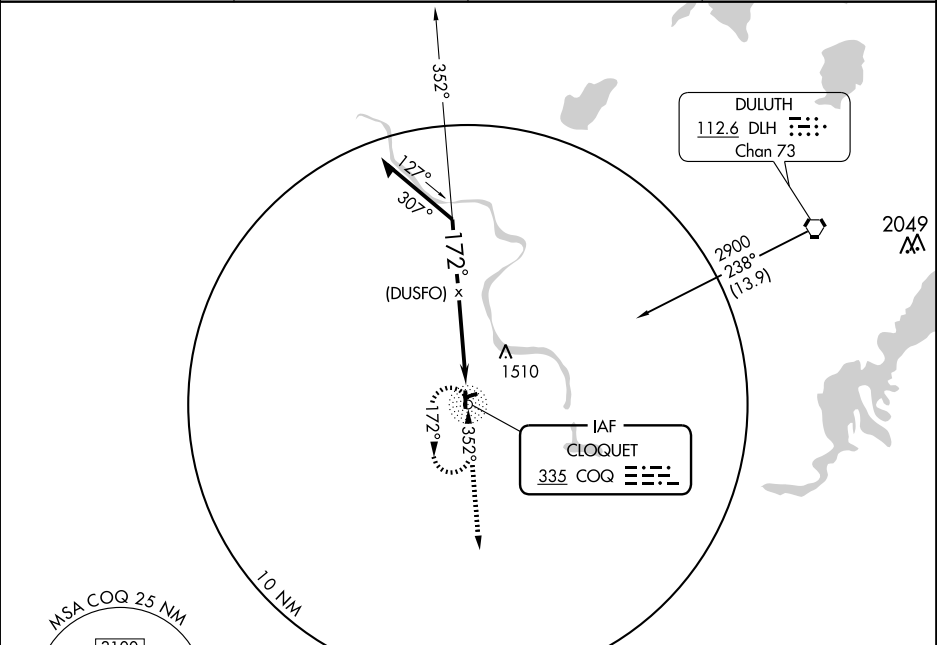
AWOS-3 118.575	MINNEAPOLIS CENTER 128.5 306.2	GCO 121.725	CTAF 122.9
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NDB COQ	APP CRS	Rwy Idg	4003
<u>335</u>	<u>172°</u>	TDZE	1274
		Apt Elev	1279

NDB or GPS RWY 17
CLOQUET CARLTON COUNTY (COQ)

▼ ▲ NA		MISSED APPROACH: Climb to 2900 then direct COQ NDB and hold.	
AWOS-3 118.525	DULUTH APP CON ★ 125.45 255.9	CLNC DEL 122.15	UNICOM 122.8 (CTAF) ①

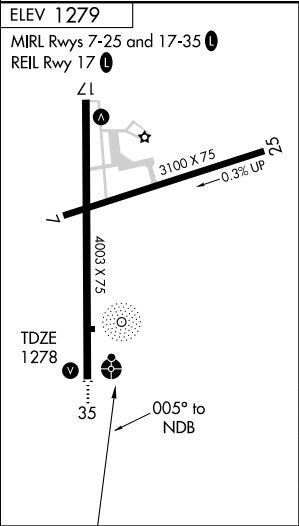
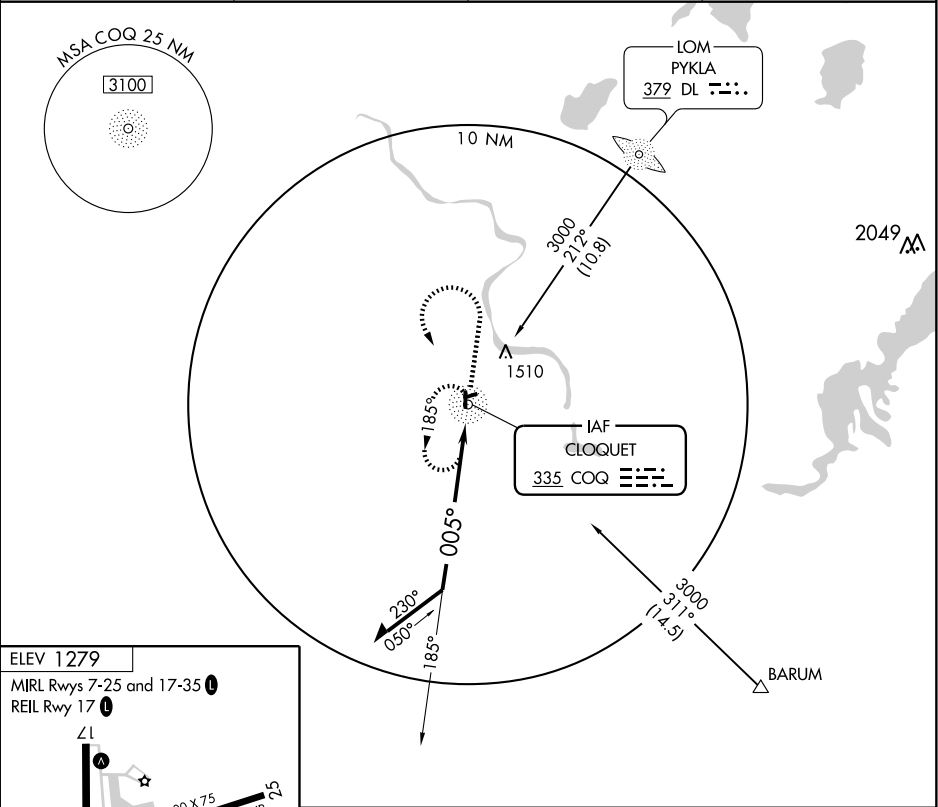


NDB COQ	APP CRS	Rwy Idg	4003
335	005°	TDZE	1278
		Apt Elev	1279

NDB RWY 35
CLOQUET CARLTON COUNTY (COQ)

NA	When local altimeter setting not received, use Duluth Intl altimeter setting and increase all MDAs 60 feet and increase S-35 and Circling Cat. C visibilities ¼ mile.	ODALS	MISSED APPROACH: Climb to 2300 then climbing left turn to 3000 direct COQ NDB and hold, continue climb-in-hold to 3000.
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AWOS-3 118.525	DULUTH APP CON ★ 125.45 255.9	CINC DEL 122.15	UNICOM 122.8 (CTAF) 0
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<div>Remain within 10 NM</div> <div><div><div>3000</div><div>185°</div><div>NDB</div><div>005°</div></div><div><div>2300</div><div>3000</div><div>COQ</div><div>335</div></div></div>				
CATEGORY	A	B	C	D
S-35	1860-1	582 (600-1)	1860-1½ 582 (600-1½)	NA
CIRCLING	1860-1	581 (600-1)	1860-1½ 581 (600-1½)	NA

APP CRS	Rwy Idg	4003
356°	TDZE	1278
	Apt Elev	1279

RNAV (GPS) RWY 35
CLOQUET CARLTON COUNTY (COQ)

T DME/DME RNP-0.3 NA.
VDP NA when using Duluth Intl altimeter setting.

A When local altimeter setting not received, use Duluth Intl altimeter setting and increase all MDAs 60 feet and Cat. C Circling visibility $\frac{1}{4}$ mile.

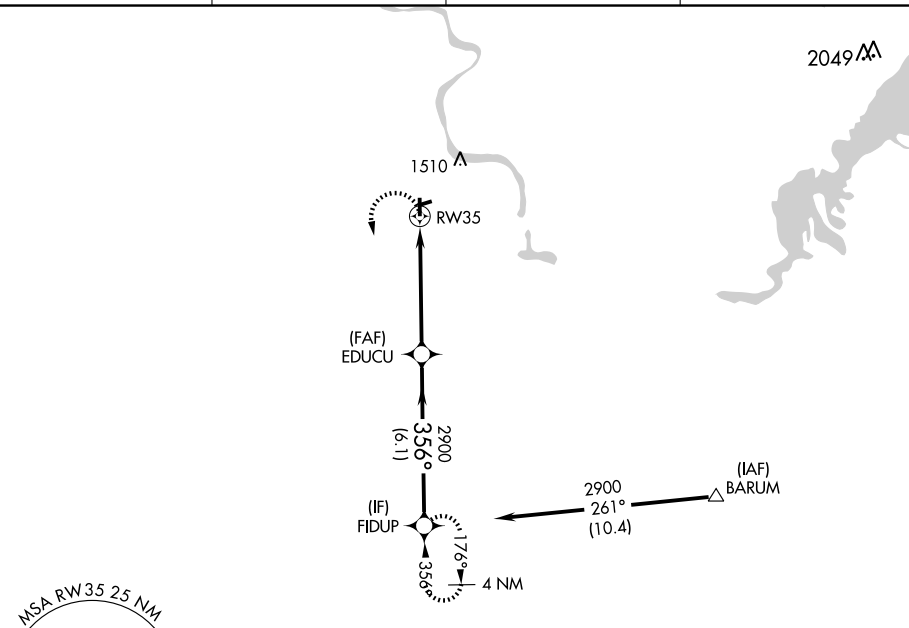
ODALS



MISSED APPROACH: Climbing left turn to 2900 direct FIDUP and hold.

AWOS-3
118.525

DULUTH APP CON ★
125.45 255.9

CLNC DEL
122.15UNICOM
122.8 (CTAF) **L**

NC-1. 17 DEC 2009 to 14 JAN 2010

2900	FIDUP	VGSI and descent angles not coincident.
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EDU

FIDUP

1.2 NM to
RW35

2900

356°

2900

Procedure
Turn
NA

$$\frac{\angle 3.04^\circ}{TCH\ 40}$$
Tur
NIA

1.2

7 NM

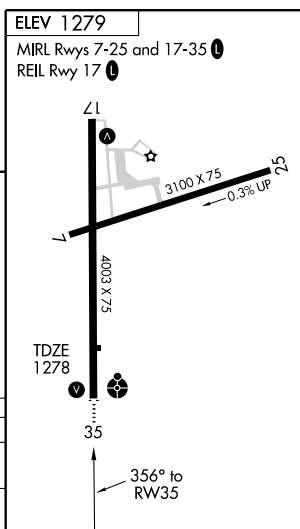
6.1 NM —————

1.2	A
-----	---

	B
--	---

C

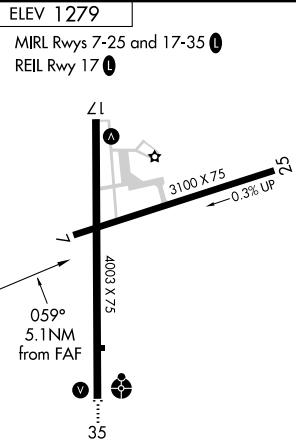
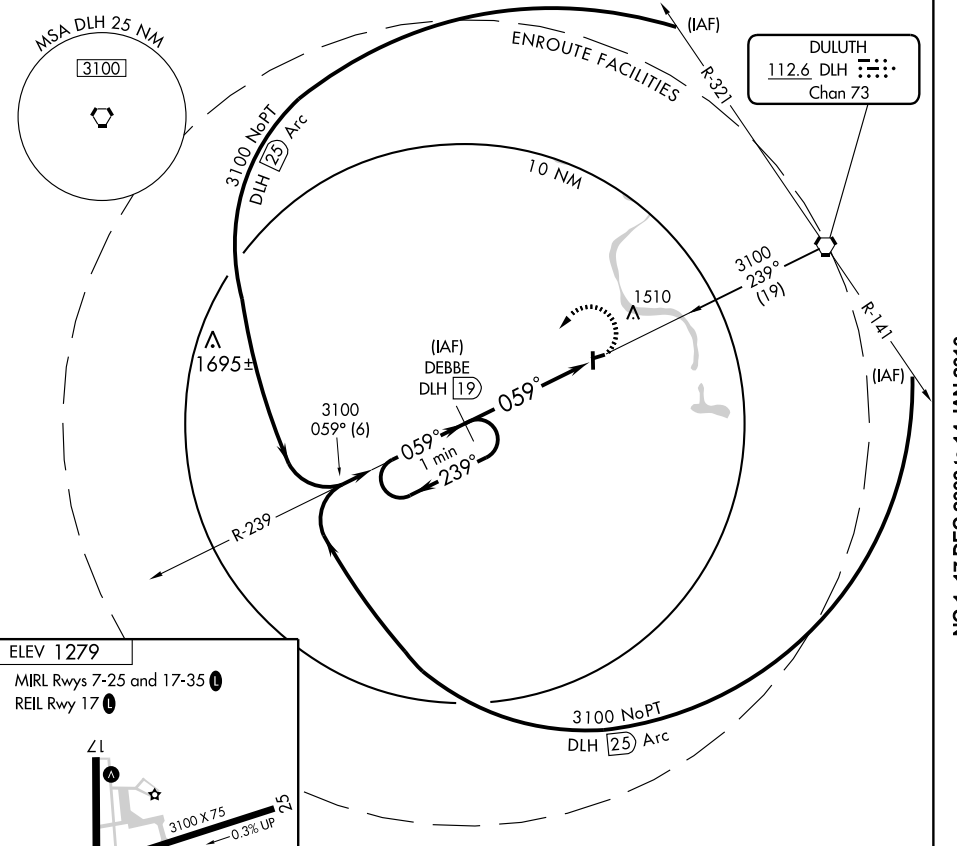
D



NA

MISSED APPROACH: Climbing left turn to 3100 via DLH R-239 to DEBBE DLH 19 DME and hold.

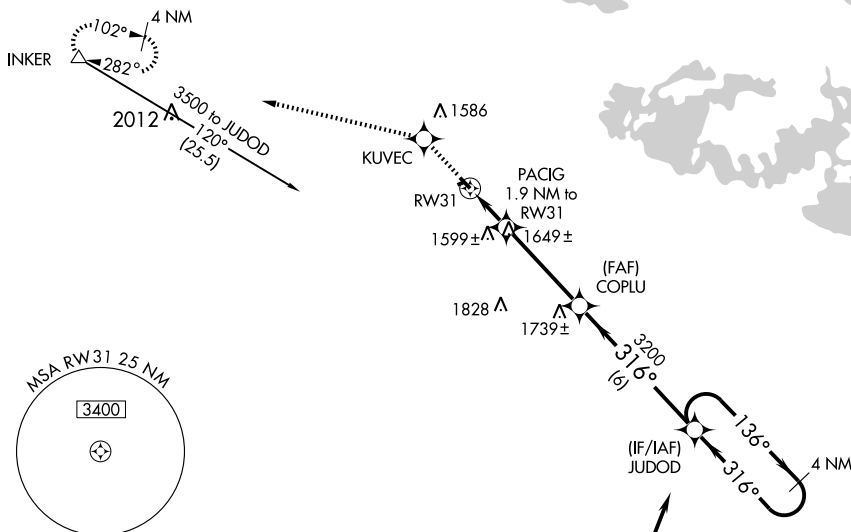
AWOS-3 118.525	DULUTH APP CON ★ 125.45 255.9	CLNC DEL 122.15	UNICOM 122.8 (CTAF) 0
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One Minute Holding Pattern		DEBBE DLH 19	3100 DLH R-239	DEBBE DLH 19
3100		239°	059°	059°
		5.1 NM		
CATEGORY	A	B	C	D
CIRCLING	1740-1 462 (500-1)	1760-1 482 (500-1)	1760-1½ 482 (500-1½)	NA

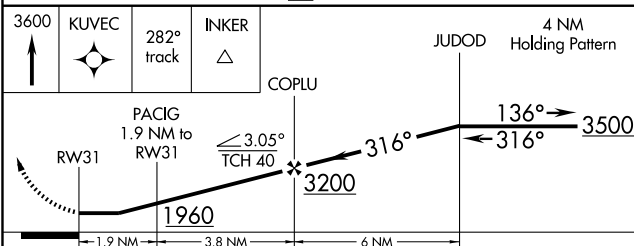
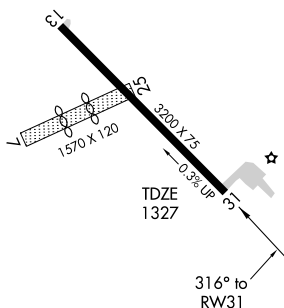
COOK MUNI (CQM)

MISSED APPROACH: Climb to 3600 direct KUVEC and via 282° track to INKER and hold.

CTAF
122.9 **L**

NC-1. 17 DEC 2009 to 14 JAN 2010

ELEV 1327



CATEGORY	A	B	C	D
LNAV MDA	1820-1	493 (500-1)	NA	
CIRCLING	1900-1	573 (600-1)	NA	

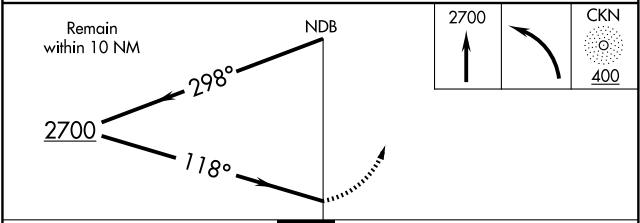
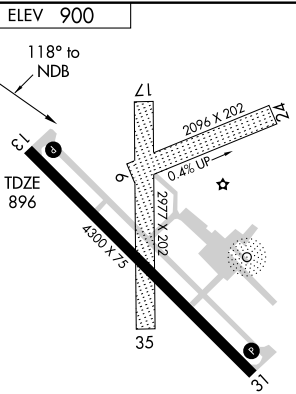
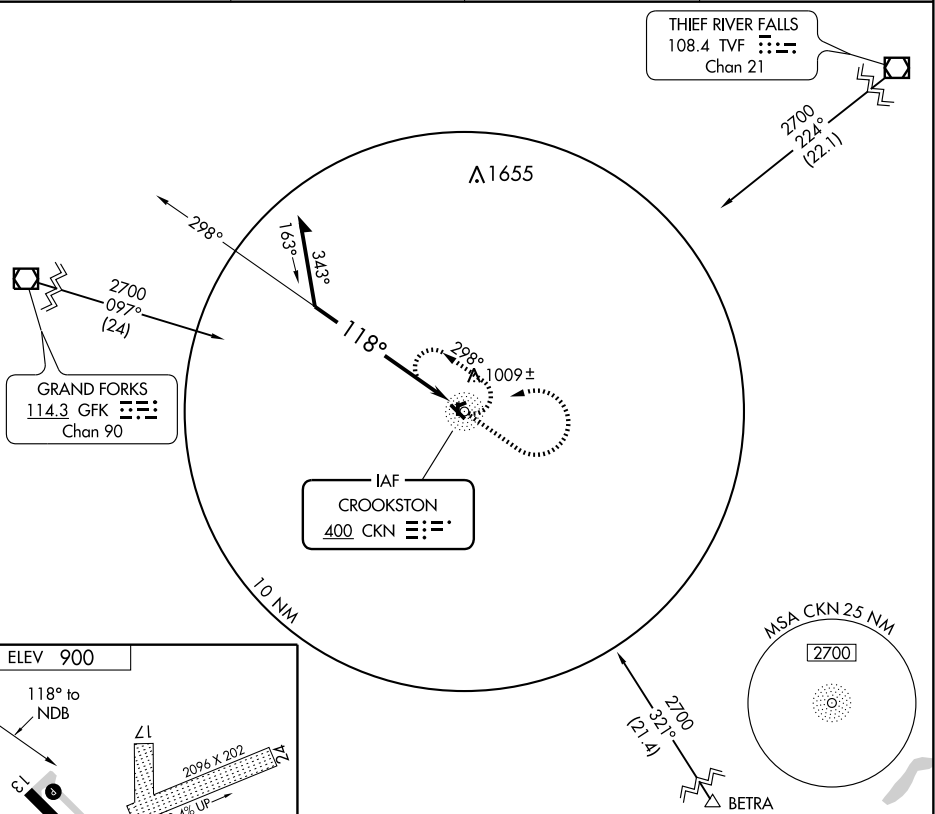
MIRL Rwy 13-31 **L**

NDB CKN	APP CRS	Rwy Idg	4300
400	118°	TDZE	896
		Apt Elev	900

NDB RWY 13

CROOKSTON MUNI-KIRKWOOD FIELD (CKN)

<p>NA If local altimeter setting not received, use Grand Forks altimeter setting and increase all MDAs 80 feet.</p>		MISSED APPROACH: Climb to 2700 then left turn direct CKN NDB and hold.	
AWOS-3 400	GRAND FORKS APP CON 118.1 318.1	CLNC DEL 118.15	UNICOM 122.7 (CTAF) 0



REIL Rwy 13 and 31 **0**
MIRL Rwy 13-31 **0**

CATEGORY	A	B	C	D
S-13	1360-1	464 (500-1)	1360-1 ¼ 464 (500-1 ¼)	NA
CIRCLING	1360-1	460 (500-1)	1360-1 ½ 460 (500-1 ½)	NA

WAAS CH 72704 W13A	APP CRS 128°	Rwy Idg TDZE Apt Elev	4300 896 900
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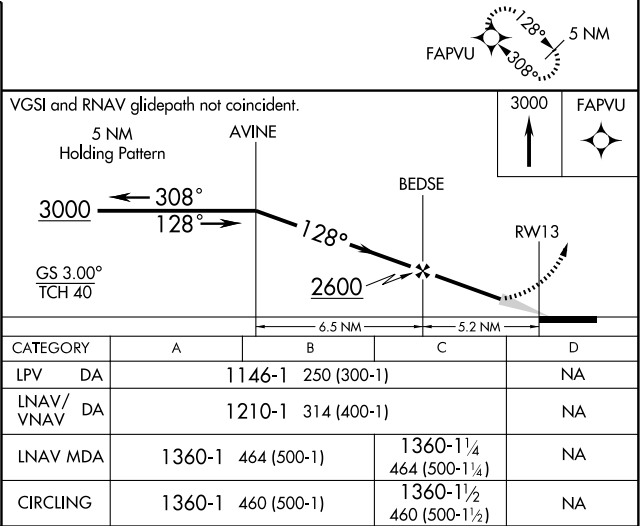
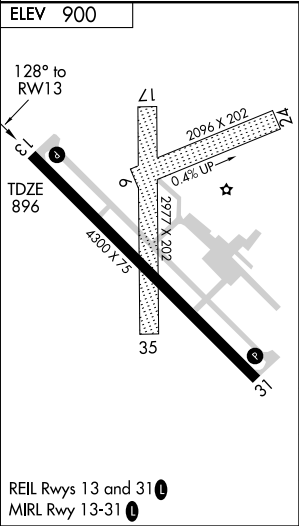
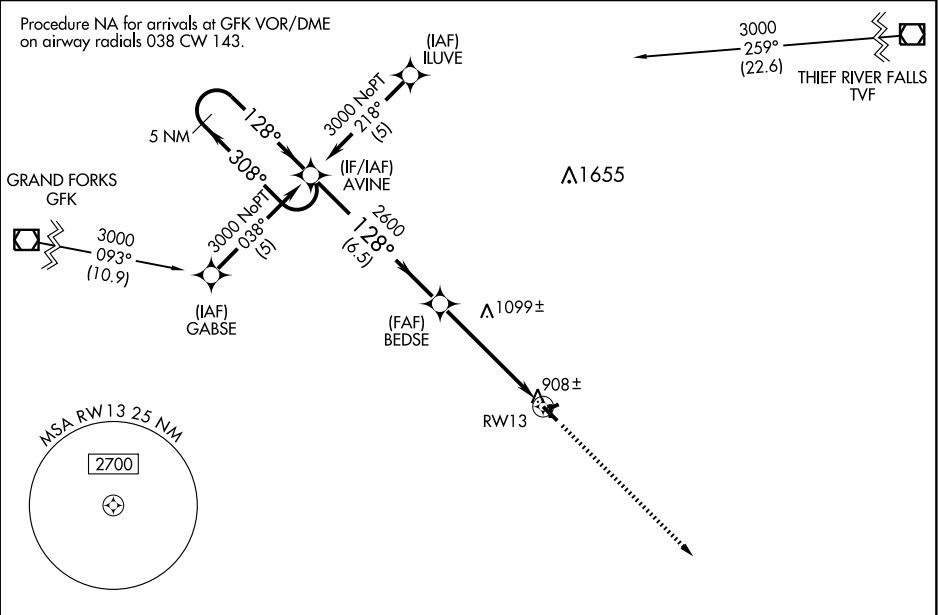
RNAV (GPS) RWY 13

CROOKSTON MUNI-KIRKWOOD FIELD (CKN)

⚠ Baro-VNAV NA when using Grand Forks altimeter setting.
⚠ For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). DME/DME RNP-0.3 NA.
If local altimeter setting not received, use Grand Forks altimeter setting and increase all DAs 62 feet and all MDAs 80 feet.

MISSED APPROACH: Climb to 3000 direct FAPVU and hold.

AWOS-3 400	GRAND FORKS APP CON 118.1 318.1	CLNC DEL 118.15	UNICOM 122.7 (CTAF) 0
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WAAS CH 69304 W31A	APP CRS 308°	Rwy Idg TDZE Apt Elev	4300 897 900
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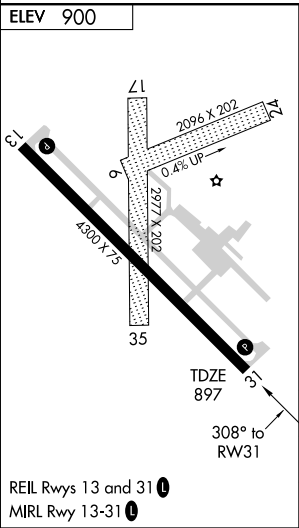
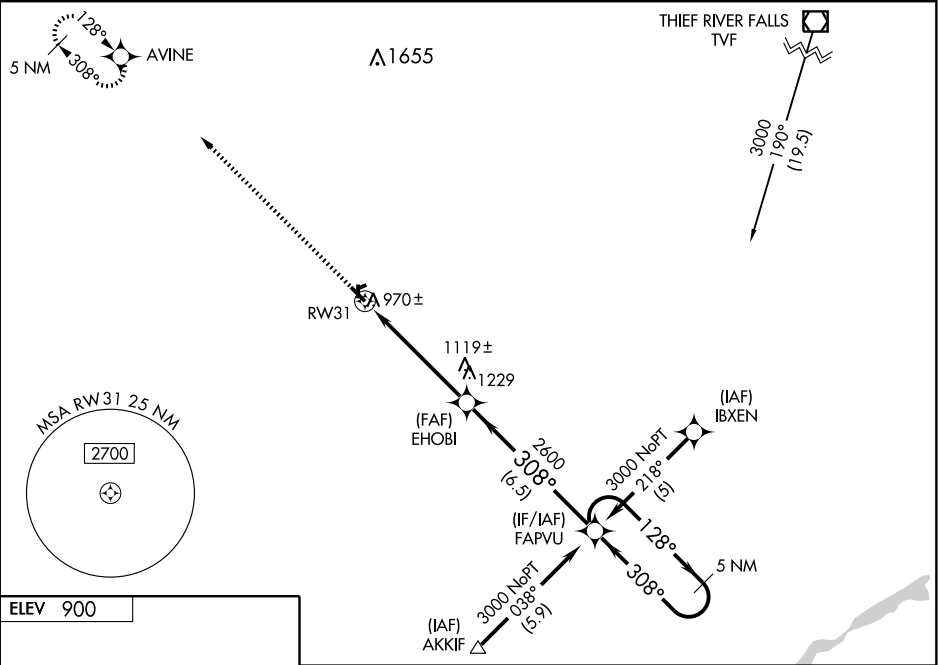
RNAV (GPS) RWY 31

CROOKSTON MUNI-KIRKWOOD FIELD (CKN)

Baro-VNAV NA when using Grand Forks altimeter setting.
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F).
If local altimeter setting not received, use Grand Forks altimeter setting and increase all DAs 62 feet and all MDAs 80 feet.
DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 3000 direct AVINE and hold.

AWOS-3 400	GRAND FORKS APP CON 118.1 318.1	CLNC DEL 118.15	UNICOM 122.7 (CTAF) 1
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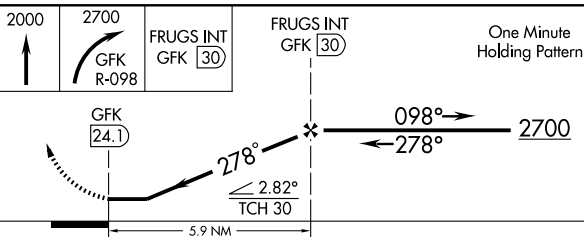
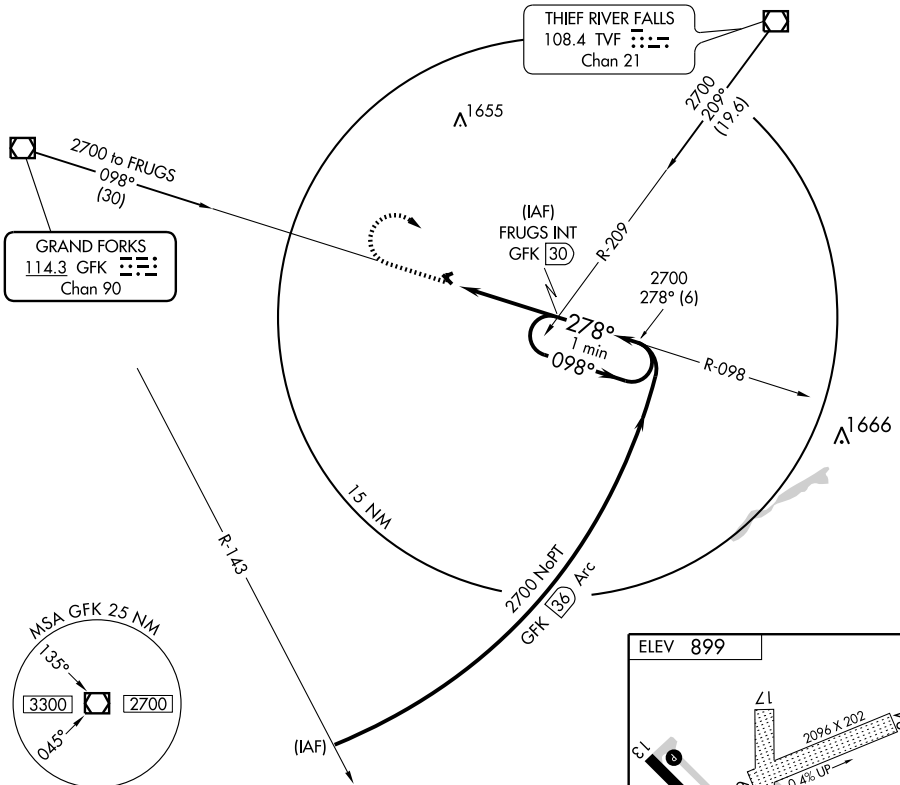


3000 AVINE		VGSI and RNAV glidepath not coincident. FAPVU		5 NM Holding Pattern
		EHOBI		GS 3.00° TCH 40
RW31		5.2 NM		6.5 NM
CATEGORY	A	B	C	D
LPV DA	1157-1 260 (300-1)			NA
LNAV/VNAV DA	1320-1½ 423 (500-1½)			NA
LNAV MDA	1380-1	483 (500-1)	1380-1¼ 483 (500-1¼)	NA
CIRCLING	1380-1	480 (500-1)	1380-1½ 480 (500-1½)	NA

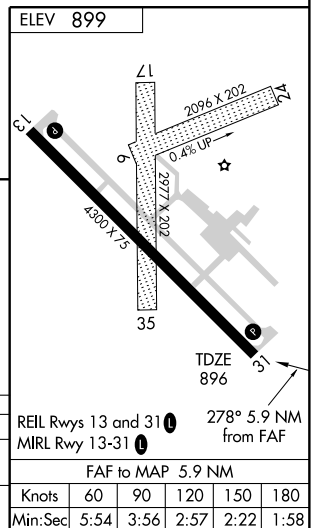
VOR/DME GFK <u>114.3</u> Chan 90	APP CRS 278°	Rwy Idg 4300 TDZE 896 Apt Elev 899
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TA

UNICOM
122.7 (CTAF) **L**



CATEGORY	A	B	C	D
S-31	1700-1 804 (900-1)	1700-1½ 804 (900-1½)	1700-2¼ 804 (900-2¼)	NA
CIRCLING	1700-1 801 (900-1)	1700-1½ 801 (900-1½)	1700-2¼ 801 (900-2¼)	NA



APP CRS	Rwy Idg	4500
135°	TDZE	1397
	Apt Elev	1397

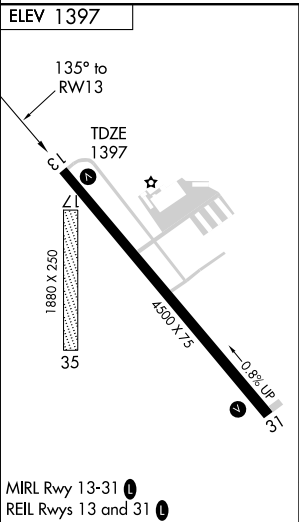
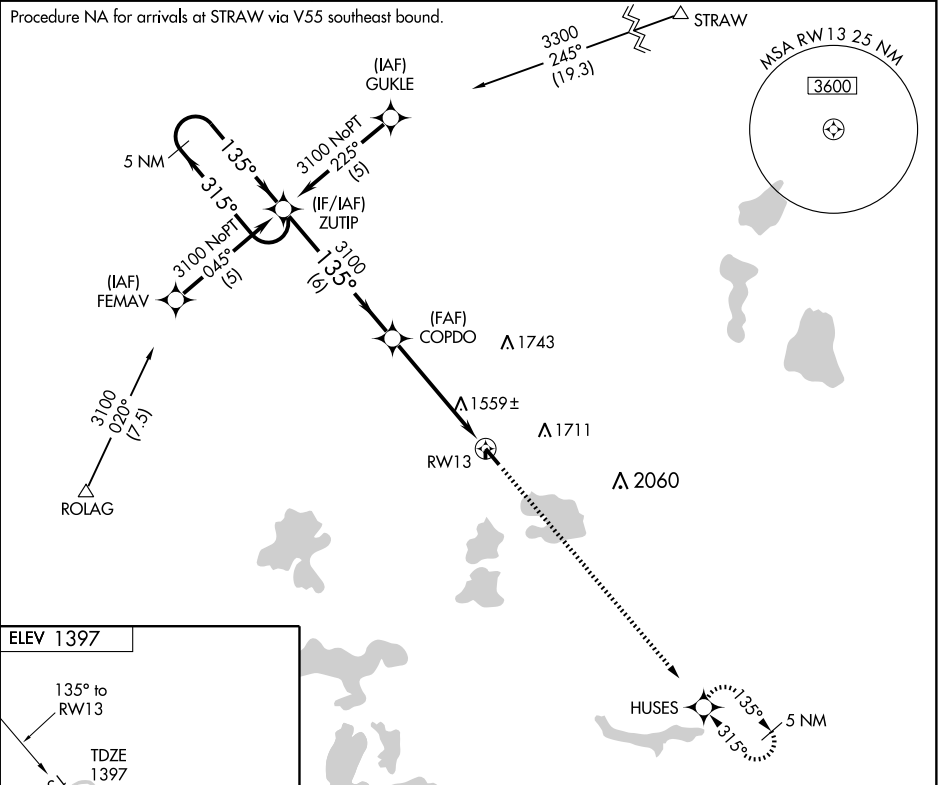
RNAV (GPS) RWY 13
DETROIT LAKES-WETHING FIELD (DTL)

When VGSI inoperative, straight-in/circling Rwy 13 procedure NA at night.
DME/DME RNP -0.3 NA. Visibility reduction by helicopters NA.
If local altimeter setting not received, use Park Rapids altimeter setting and increase DA/MDAs 100 feet.

MISSED APPROACH: Climb to 3100 direct HUSES and hold.

AWOS-3 111.2	PRINCETON RADIO 122.5	UNICOM 122.8 (CTAF) 1
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Procedure NA for arrivals at STRAW via V55 southeast bound.



5 NM Holding Pattern		ZUTIP	COPDO	3100	HUSES
3100		315°	135°	3100	
		135°			
		6 NM	5.1 NM		
CATEGORY	A	B	C	D	
RNAV MDA	1820-1	423 (500-1)	1820-1 1/4	423 (500-1 1/4)	
CIRCLING	1880-1	1940-1	1940-1 1/2	2080-2 1/4	
	483 (500-1)	543 (600-1)	543 (600-1 1/2)	683 (700-2 1/4)	

WAAS CH 86704 W31A	APP CRS 315°	Rwy Idg TDZE Apt Elev	4500 1390 1397
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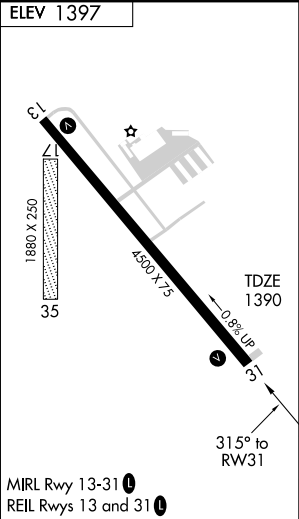
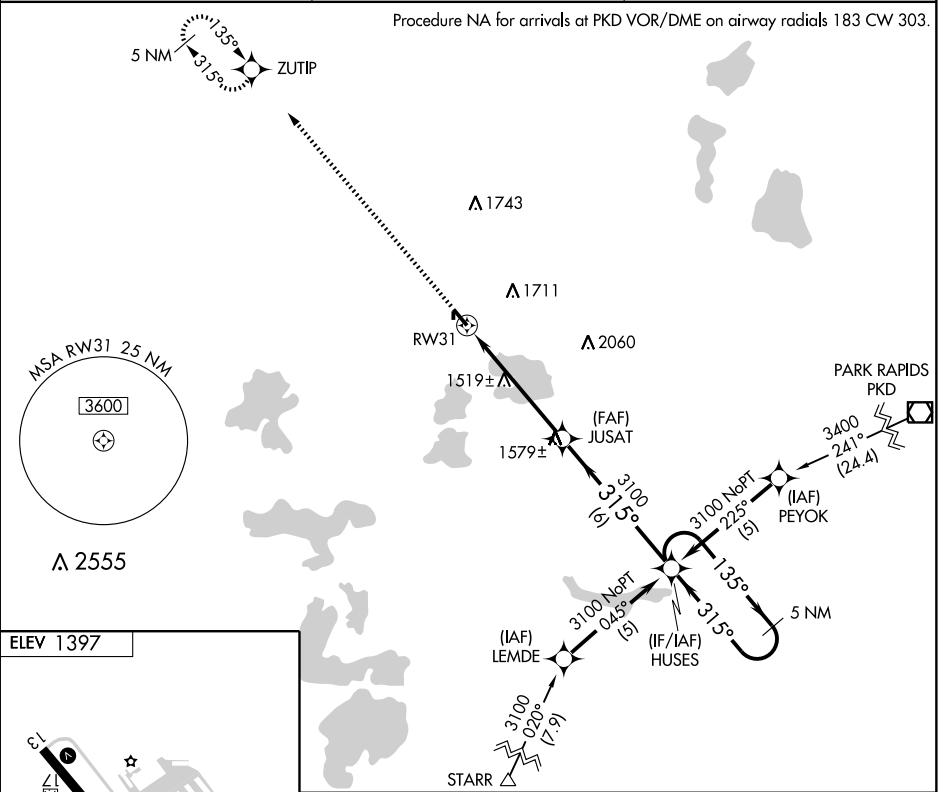
RNAV (GPS) RWY 31

DETROIT LAKES-WETHING FIELD (DTL)

⚠ DME/DME RNP- 0.3 NA. Visibility reduction by helicopters NA.
⚠ VDP NA when using Park Rapids altimeter setting.
If local altimeter setting not received, use Park Rapids altimeter setting and increase DA/MDAs 100 feet.

MISSED APPROACH: Climb to 3100 direct ZUTIP and hold.

AWOS-3 111.2	PRINCETON RADIO 122.5	UNICOM 122.8 (CTAF) 0
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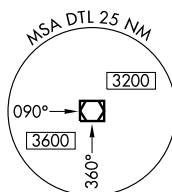
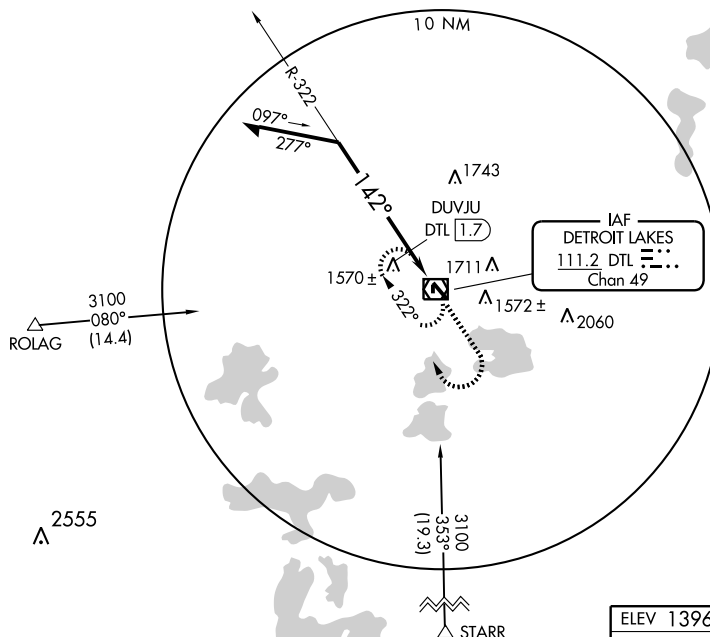


3100	ZUTIP	JUSAT	HUSES	5 NM Holding Pattern
*LNAV only	*1.2 NM to RW31	315°	135°	3100
		3100		GS 3.00° TCH 35
1.2	4.1 NM	6 NM		
CATEGORY	A	B	C	D
LPV DA	1654-1 264 (300-1)			
LNAV MDA	1780-1 390 (400-1)			1780-1¼ 390 (400-1¼)
CIRCLING	1880-1 483 (500-1)	1940-1 543 (600-1)	1940-1½ 543 (600-1½)	2080-2¼ 683 (700-2¼)



MISSED APPROACH: Climb to 2300 then climbing right turn to 3100 direct DTL VOR/DME and hold.

UNICOM
122.8 (CTAF) **L**



NC-1. 17 DEC 2009 to 14 JAN 2010

Remain
within 10 NM

VOR/DME

3100

DTL 1.7

$$\frac{3.02^\circ}{TCL 45}$$

1900

1.4 nm

2300

31C

DTL

111.2

ELEV 1396

142° to
VOP/DME

TDZE

3

250

35

3

7 UP

31

CATEGORY	A	B	C	D
S-13	1900-1 504 (600-1)		1900-1½ 504 (600-1½)	
CIRCLING	1900-1 504 (600-1)	1940-1 544 (600-1)	1940-1½ 544 (600-1½)	2080-2¼ 684 (700-2¼)
DUVJU FIX MINIMUMS				
S-13	1820-1 424 (500-1)		1820-1¼ 424 (500-1¼)	
CIRCLING	1880-1 424 (500-1)	1940-1 544 (600-1)	1940-1½ 544 (600-1½)	2080-2¼ 684 (700-2¼)

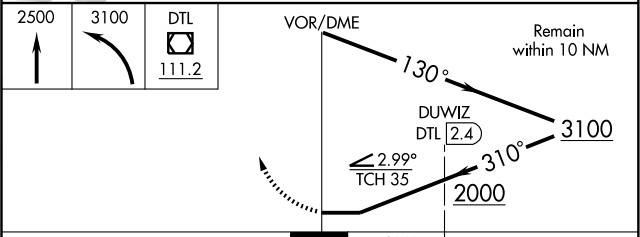
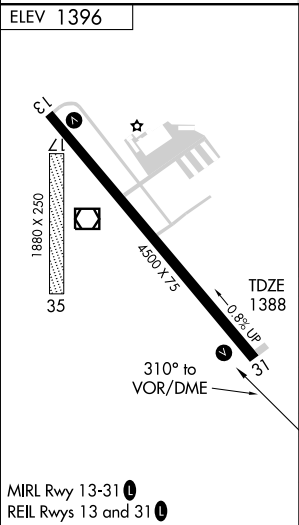
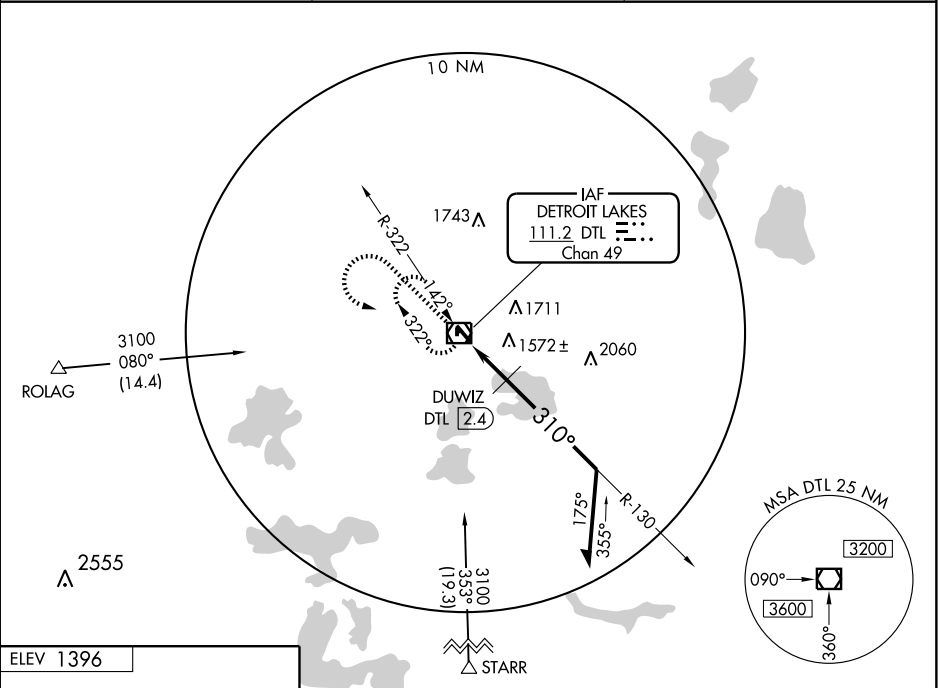
MIRL Rwy 13-31 **L**
REIL Rwy 13 and 31 **L**

VOR/DME DTL	APP CRS	Rwy Idg	4500
111.2	310°	TDZE	1388
Chan 49		Apt Elev	1396

VOR RWY 31
DETROIT LAKES-WETHING FIELD (DTL)

NA	MISSED APPROACH: Climb to 2500 then climbing left turn to 3100 direct DTL VOR/DME and hold.
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AWOS-3 111.2	PRINCETON RADIO 122.5	UNICOM 122.8 (CTAF)
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CATEGORY	A	B	C	D
S-31	2000-1	612 (700-1)	2000-1¾ 612 (700-1¾)	2000-2 612 (700-2)
CIRCLING	2000-1	604 (700-1)	2000-1¾ 604 (700-1¾)	2080-2¼ 684 (700-2¼)
DUWIZ FIX MINIMUMS				
S-31	1880-1	492 (500-1)	1880-1¼ 492 (500-1¼)	1880-1½ 492 (500-1½)
CIRCLING	1880-1 484 (500-1)	1940-1 544 (600-1)	1940-1½ 544 (600-1½)	2080-2¼ 684 (700-2¼)

APP CRS	Rwy Idg	4500
164°	TDZE	1295
	Apt Elev	1305

RNAV (GPS) RWY 16
DODGE CENTER (TOB)

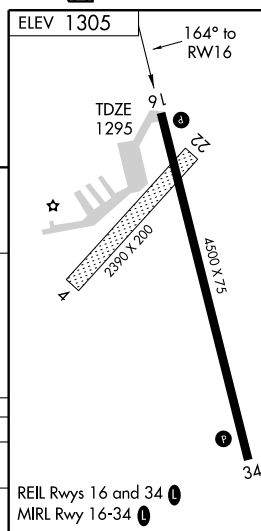
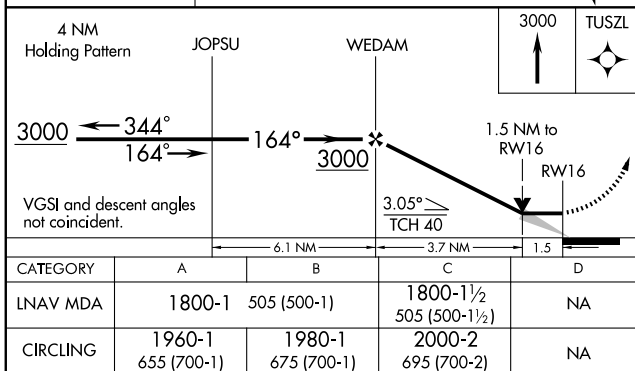
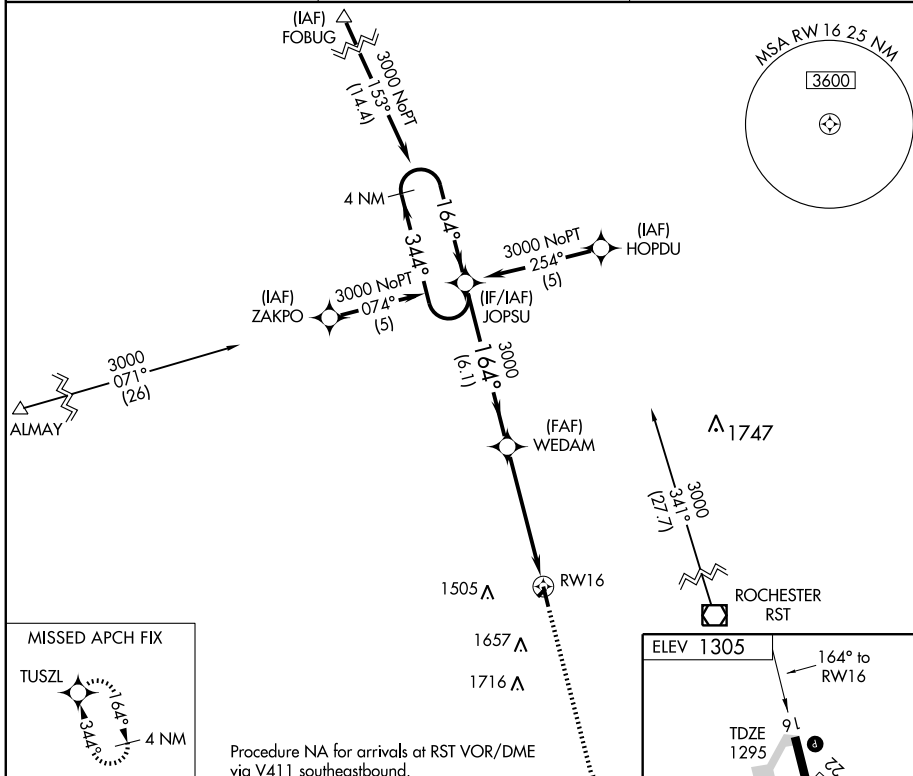
DODGE CENTER (TOB)

T	DME/DME RNP- 0.3 NA.
A	VDP NA with Rochester Intl altimeter setting. When local altimeter setting not received, use Rochester Intl altimeter setting and increase all MDA 40 feet.

MISSED APPROACH: Climb to 3000 direct TUSZL and hold.

AWOS-3
119,075

ROCHESTER APP CON★
119.8 251,125

CTAF
122.9 **L**

APP CRS	Rwy Idg	4500
344°	TDZE	1305
	Apt Elev	1305

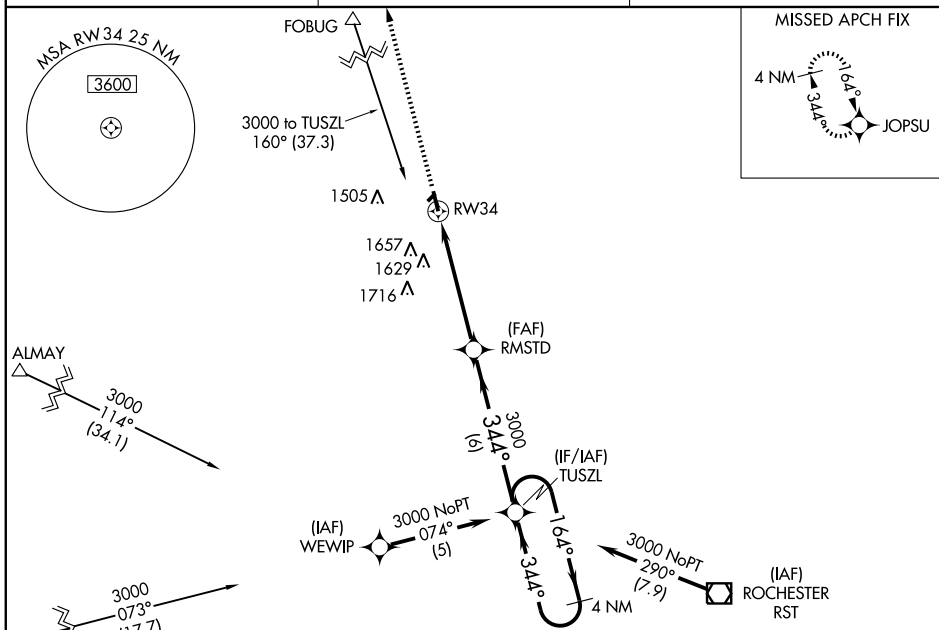
RNAV (GPS) RWY 34
DODGE CENTER (TOB)

T DME/DME RNP-0.3 NA.
A When local altimeter setting not received, use Rochester Intl altimeter setting and increase all MDA 40 feet, LNAV Cat C visibility ¼ mile. VDP NA with Rochester Intl altimeter setting.

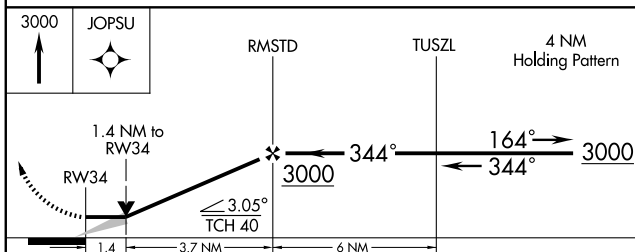
MISSED APPROACH: Climb to 3000 direct JOPSU and hold.

AWOS-3
119.075

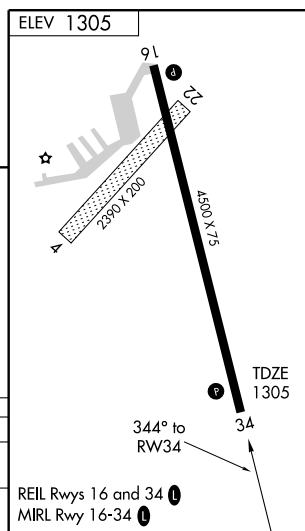
ROCHESTER APP CON ★
119.8 251.125

CTAF
122.9 

Procedure NA for arrivals at RST VOR/DME via V411
southeastbound and arrivals at ALMAY via V505 northbound.



CATEGORY	A	B	C	D
LNAV MDA	1780-1	475 (500-1)	1780-1¼ 475 (500-1¼)	NA
CIRCLING	1960-1 655 (700-1)	1980-1 675 (700-1)	2000-2 695 (700-2)	NA



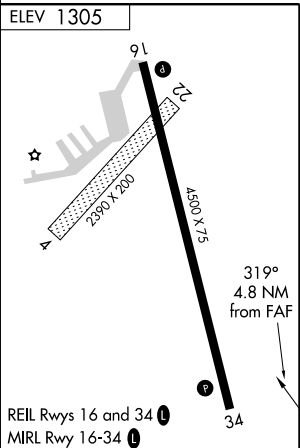
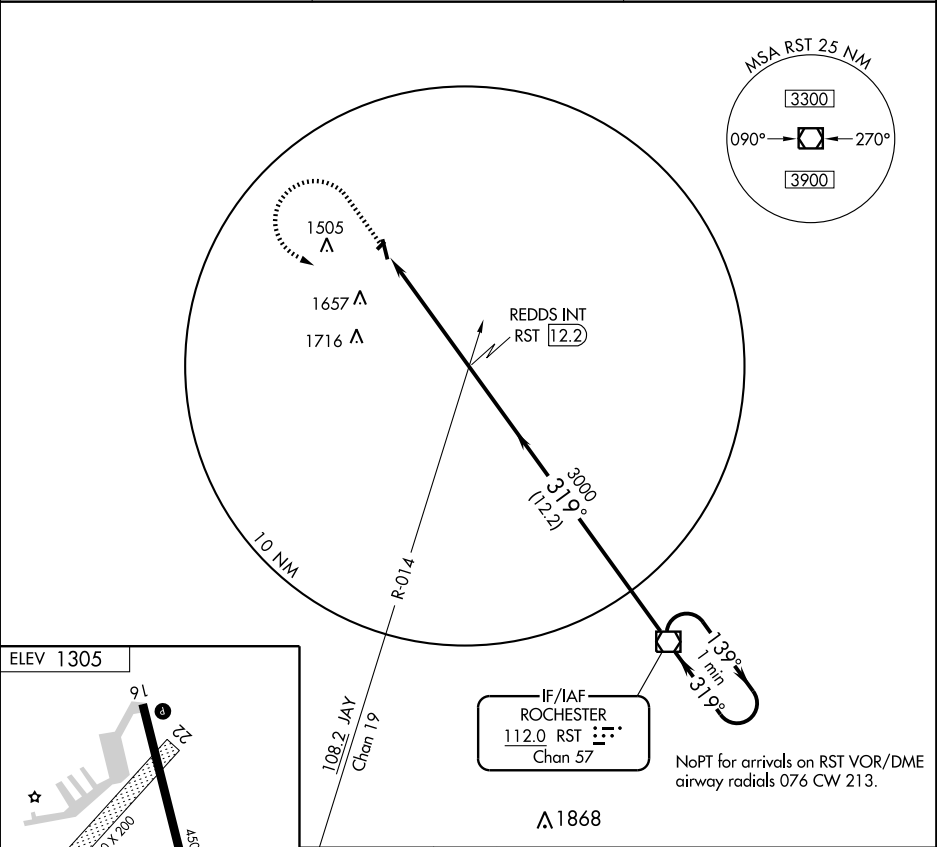
VOR/DME RST 112.0 Chan 57	APP CRS 319°	Rwy Idg TDZE Apt Elev 1305	N/A N/A 1305
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VOR-A
DODGE CENTER (TOB)

When local altimeter setting not received, use Rochester Intl altimeter setting and increase all MDA 40 feet.

MISSED APPROACH: Climb to 2500 then climbing left turn to 3000 via RST VOR/DME R-319 to RST VOR/DME and hold.

AWOS-3 119.075	ROCHESTER APP CON ★ 119.8 251.125	CTAF 122.9 0
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FAF to MAP 4.8 NM						CATEGORY		A	B	C	D
Knots	60	90	120	150	180	CIRCLING		1960-1 655 (700-1)	1980-1 675 (700-1)	2000-2 695 (700-2)	NA
Min:Sec	4:48	3:12	2:24	1:55	1:36						



AL-125 (FAA)

LOC I-JUD 108.7	APP CRS 270°	Rwy Idg 10162 TDZE 1421 Apt Elev 1428
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COPTER ILS or LOC RWY 27

DULUTH INTL (DLH)



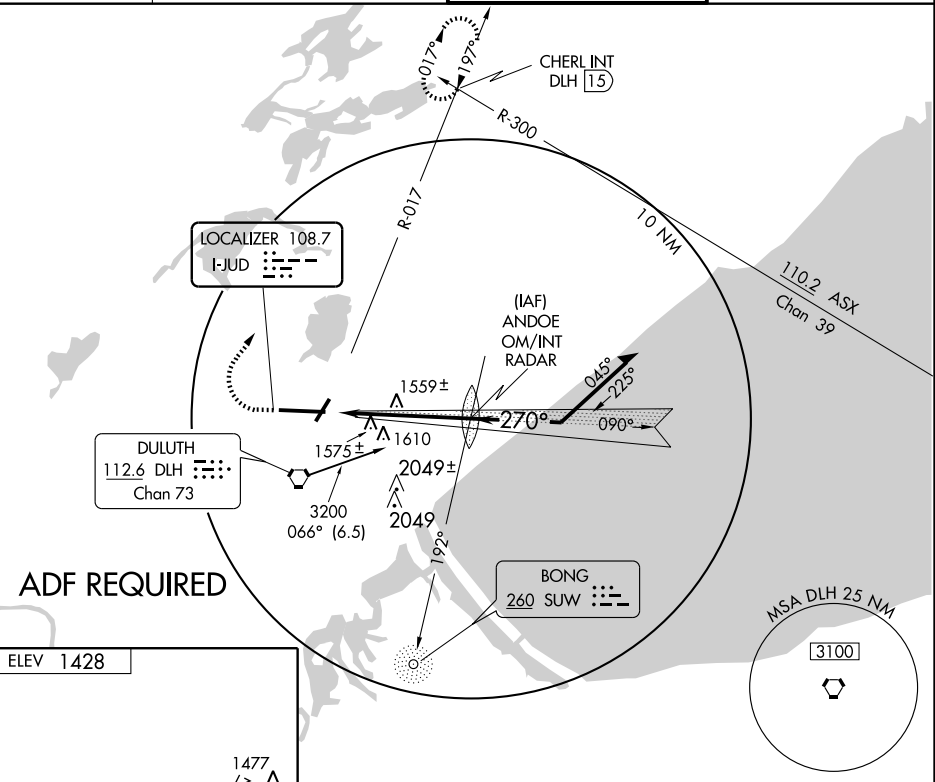
ASP For inoperative MALSR increase RVR to 2400.

MALSR



MISSED APPROACH: Climb to 3000 then climbing right turn to 4500 via DLH R-017 to CHERL Int/DLH 15 DME and hold.

ATIS 124.1 270.1	DULUTH APP CON ★ 125.45 255.9	DULUTH TOWER 118.3 257.8	GND CON 121.9 348.6
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NC-1. 17 DEC 2009 to 14 JAN 2010

ELEV 1428

1570

1492

1485

1461

1522

1477

1451

1421

1559 ±

10.162 X 150


3.719 X 150

270° 5.2 NM from FAF

TDZE 1421

FAF to MAP 5.2 NM

	Knots	45	60	75	90	105
Min:Sec	6:56	5:12	4:10	3:28	2:58	

<div>3000 ↑</div>		<div>4500 ↻ DLH R-017</div>	<div>CHERL INT DLH 15</div>		<div>ANDOE OM/INT RADAR</div>		<div>Remain within 5 NM</div>	
<div></div>		<div>5.2 NM</div>		<div>3180</div>		<div>090°</div>		
				<div>270°</div>		<div>3200</div>		
				<div>3200</div>		<div>GS 3.00° TCH 85</div>		
CATEGORY	COPTER		B	C	D			
S-ILS 27	1621/16 200 (200-¼)		NA					
S-LOC 27	1890/16 399 (400-¼)		NA					
CIRCLING	NA							

LOC I-DLH <u>110.3</u>	APCH CRS 090°	Rwy Idg 10,162 TDZE 1428 Arpt Elev 1428
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AL-125 [USAF]

DULUTH INTL (KDLH)

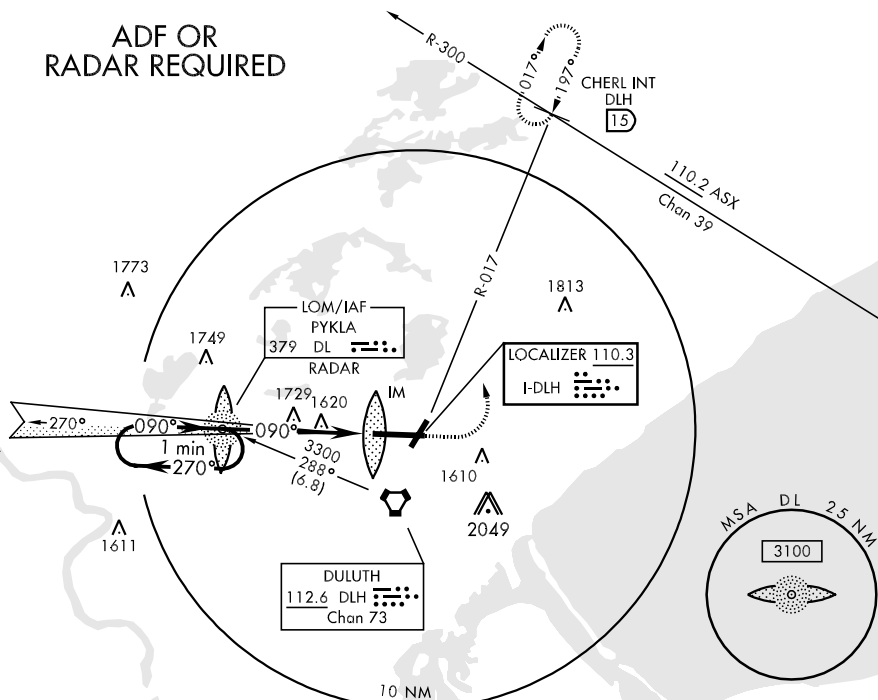
* When ALS inop, increase RVR to 24 and vis to ½ mile.



MISSED APPROACH: Climb to 3000 then climbing left turn to 4500 via DLH R-017 to CHERL INT/DLH 15 DME and hold.

ATIS 124.1 270.1	DULUTH APP CON 125.45 255.9	DULUTH TOWER 118.3 257.8	GND CON 121.9 348.6	ASR
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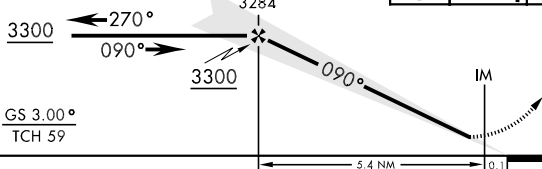
ADF OR
RADAR REQUIRED



NC-1, 17 DEC 2009 to 14 JAN 2010

One Minute Holding Pattern

PYKLA LOM



GS 3.00 °
TCH 59

ELEV 1428

090°5.6 NM

from FAF

10

$$I \otimes \mathbb{P}^1$$

1241

1428 (A)

RESULTS

REIL Rwy 3 gn

HRL Rwy 3-21

FAF

Knots	45
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Min:Sec	7:28
---------	------

CORTE

DULUTH, MINNESOTA

46°51'N-92°12'W

DULUTH INTL (KDLH)

Amdt 1 09127

CORPTEC U.S. DATA CO.

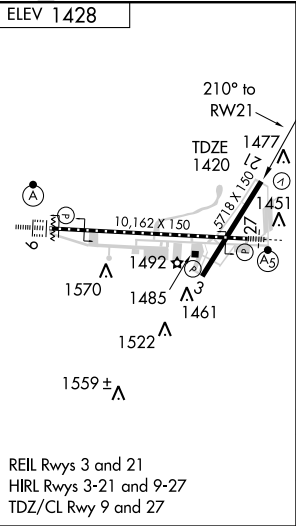
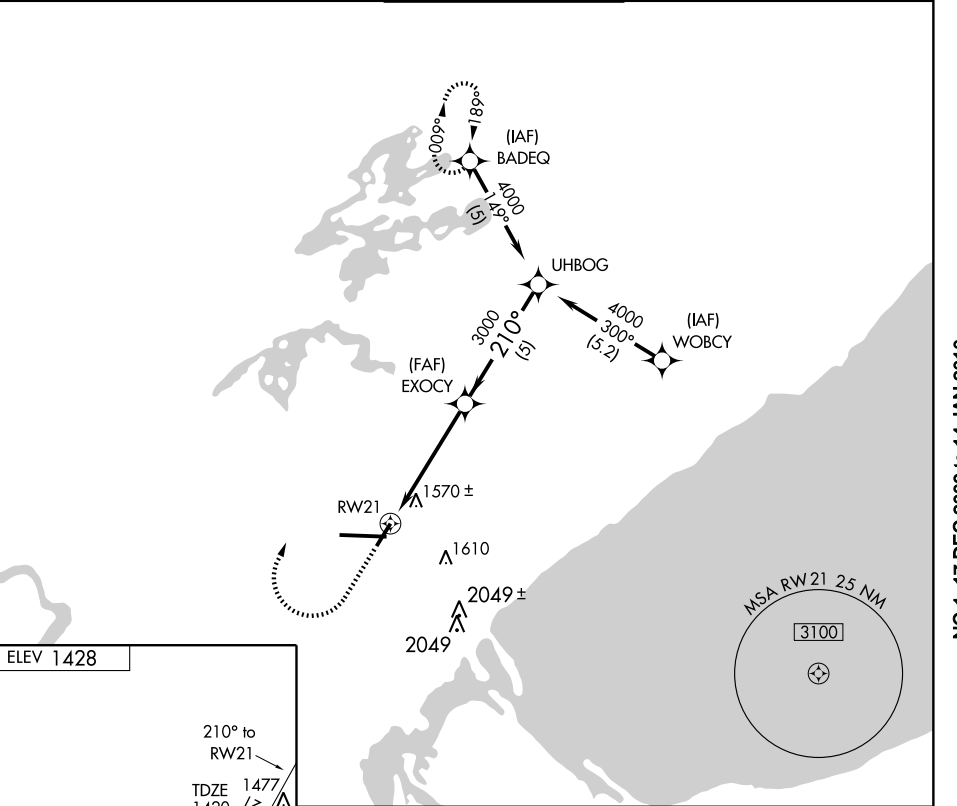
▼

NA


ASR

MISSED APPROACH: Climb to 2500, then climbing right turn to 4000 direct BADEQ WP and hold.

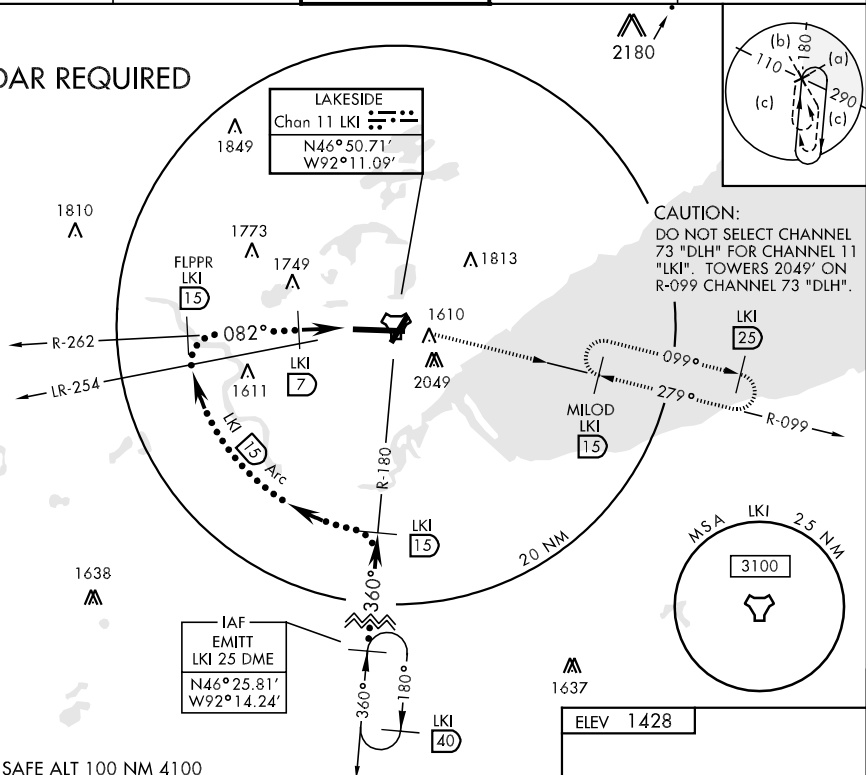
ATIS 124.1 270.1	DULUTH APP CON ★ 125.45 255.9	DULUTH TOWER 118.3 257.8	GND CON 121.9 348.6
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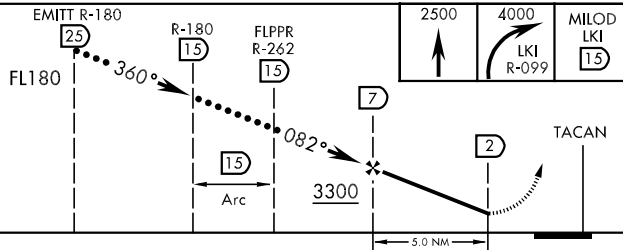
	2500	4000	BADEQ	
	↑	↷	✧	
	RW21	1.1 NM to RW21	EXOCY	UHBOG
		≤ 2.88° TCH 50	3000	4000
	1.1	3.9 NM	5 NM	Procedure Turn NA
CATEGORY	A	B	C	D
S-21	1820-1 400 (400-1)			1820-1½ 400 (400-1½)
CIRCLING	1920-1 492 (500-1)		1920-1½ 492 (500-1½)	1980-2 552 (600-2)

TACAN LKI Chan 11	APCH CRS 082°	Rwy Idg 10,162 TDZE 1428 Arpt Elev 1428	JAL-125 [USAF]	DULUTH INTL (KDLH)
* Category E not authorized SE of Rwy 3 and Rwy 27.			ALSF-2 	MISSED APPROACH: Climb to 2500 then climbing right turn to 4000 via LKI R-099 to MILOD 15 DME and hold.
ATIS 124.1 270.1	DULUTH APP CON 125.45 255.9	DULUTH TOWER 118.3 257.8	GND CON 121.9 348.6	ASR

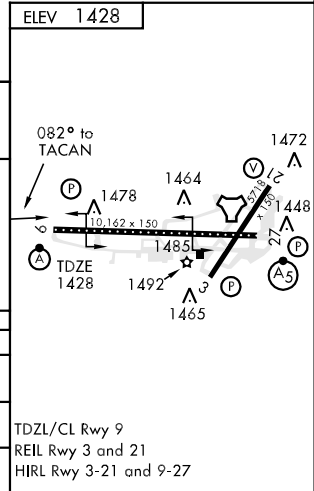
RADAR REQUIRED



EMERG SAFE ALT 100 NM 4100



CATEGORY	C	D	E
S-9	1880/40 452 (500-¾)	1880/50	452 (500-1)
CIRCLING *	1920-1½ 492 (500-1½)	1980-2	552 (600-2)
S-ASR 9	1880/40 452 (500-¾)	1880/50	452 (500-1)



TACAN LKI
Chan **11**

APCH CRS
279°

Rwy ldg
TDZE **10,162**
Arpt Elev **1428**

JAL-125 [USAF]

DULUTH INTL (KDLH)

* Category E not authorized SE of Rwy 3 and Rwy 27.



MISSED APPROACH: Climb to 4000 via LKI R-262 to FLPPR 15 DME and hold.

ATIS
124.1 270.1

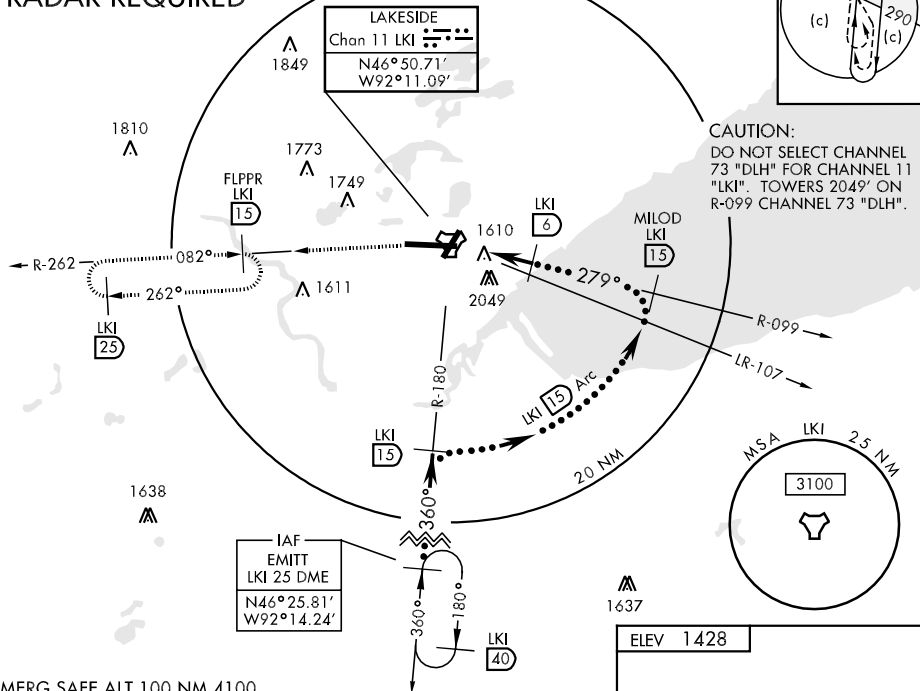
DULUTH APP CON
125.45 255.9

DULUTH TOWER
118.3 257.8

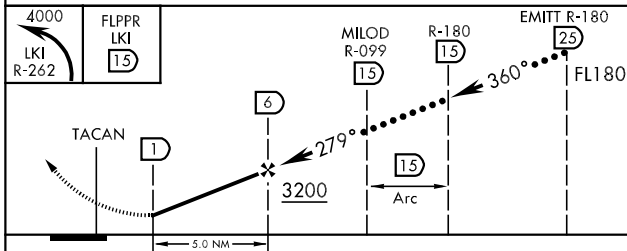
GND CON
121.9 348.6

ASR

RADAR REQUIRED



EMERG SAFE ALT 100 NM 4100



CATEGORY	C	D	E
S-27	1860/40 439 (500-34)	1860/50 439	(500-1)
CIRCLING *	1920-1½ 492 (500-1½)	1980-2 552	(600-2)
S-ASR 27	1860/40 439 (500-34)	1860/50 439	(500-1)

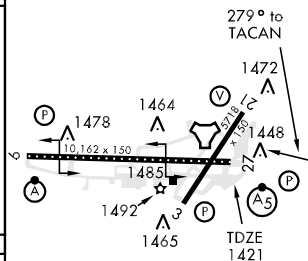
DULUTH, MINNESOTA

46°51'N-92°12'W

DULUTH INTL (KDLH)

Amdt 2 09127

ELEV 1428



TDZL/CL Rwy 9
REIL Rwy 3 and 21
HIRL Rwy 3-21 and 9-27

ASR

Circling NA for Cat E southeast of Rwy 3 and 27.
For inoperative MALSR, increase S-ILS 27 Cat E visibility to RVR 4000 and S-LOC 27 Cat E visibility to 1½ mile.

MALSR

AS

MISSED APPROACH: Climb to 3000 then climbing right turn to 4500 via DLH VORTAC R-017 to CHERL INT/DLH 1.5 DME and hold.

ATIS 124.1 270.1	DULUTH APP CON * 125.45 255.9	DULUTH TOWER 118.3 257.8	GND CON 121.9 348.6
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ADF, DME or RADAR REQUIRED

Diagram illustrating the ILS approach for Runway 27 at Duluth International Airport (DLH). The diagram shows the approach path, including the Localizer (LOC) and Glide Slope (GS). Key frequencies and distances are indicated: LOC 108.7, APP CRS 270°, and various DME distances (e.g., 1.5 NM, 3.00 NM, 5.2 NM, 8.8 NM). The diagram also shows the MSA (Minimum Safe Altitude) of 3100 feet at 25 NM. Other labels include (IAF) FOSUP, (IAF) ANDOE, (IF) WIRSA, and BONG 260 SUW.

Inset diagram showing the approach path from the FAF (Final Approach Fix) to the runway. It includes elevation markers (e.g., 1477, 1451, 1421, 1461, 1485, 1492, 1522, 1559±) and distance markers (e.g., 10.162 X 150, 57/18 X 150, 270° 5.2 NM from FAF). The diagram also shows the TDZE (Touchdown Zone Elevation) of 1421 feet.

TDZ/CL Rwy 9 and 27
REIL Rwy 3 and 21
HIRL Rwy 3-21 and 9-27

FAF to MAP 5.2 NM					
Knots	60	90	120	150	180
Min:Sec	5:12	3:28	2:36	2:05	1:44

Diagram illustrating the missed approach procedure. It shows the climb to 3000 feet, the turn to 4500 feet, and the hold at CHERL INT/DLH 1.5 DME. The diagram also shows the GS (Glide Slope) unusable for coupled approach below 2550'. Other labels include ANDOE INT/OM RADAR, WIRSA DLH 1.5, and GS 3.00° TCH 85.

CATEGORY	A	B	C	D	E
S-ILS 27	1621/24	200 (200-½)	1651/24	230 (300-½)	
S-LOC 27	1820/24 399 (400-½)			1820/40 399 (400-¾)	1820/50 399 (400-1)
CIRCLING	1920-1 492 (500-1)		1920-1½ 492 (500-1½)	1980-2 552 (600-2)	

NC-1. 17 DEC 2009 to 14 JAN 2010

LOC I-DLH	APP CRS	Rwy Idg
110.3	090°	10162
		TDZE 1428
		Apt Elev 1428

⚠

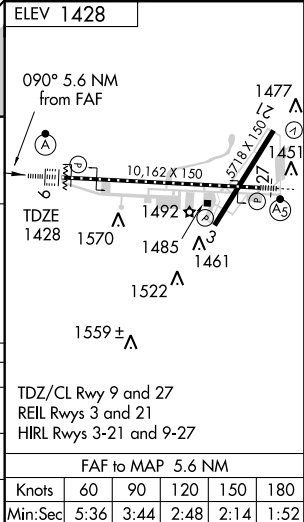
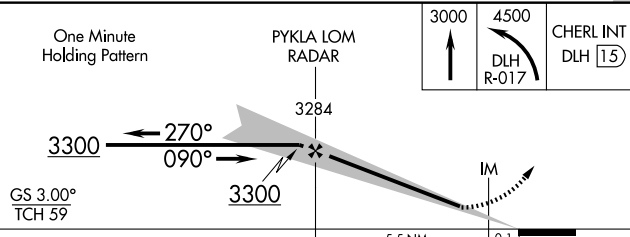
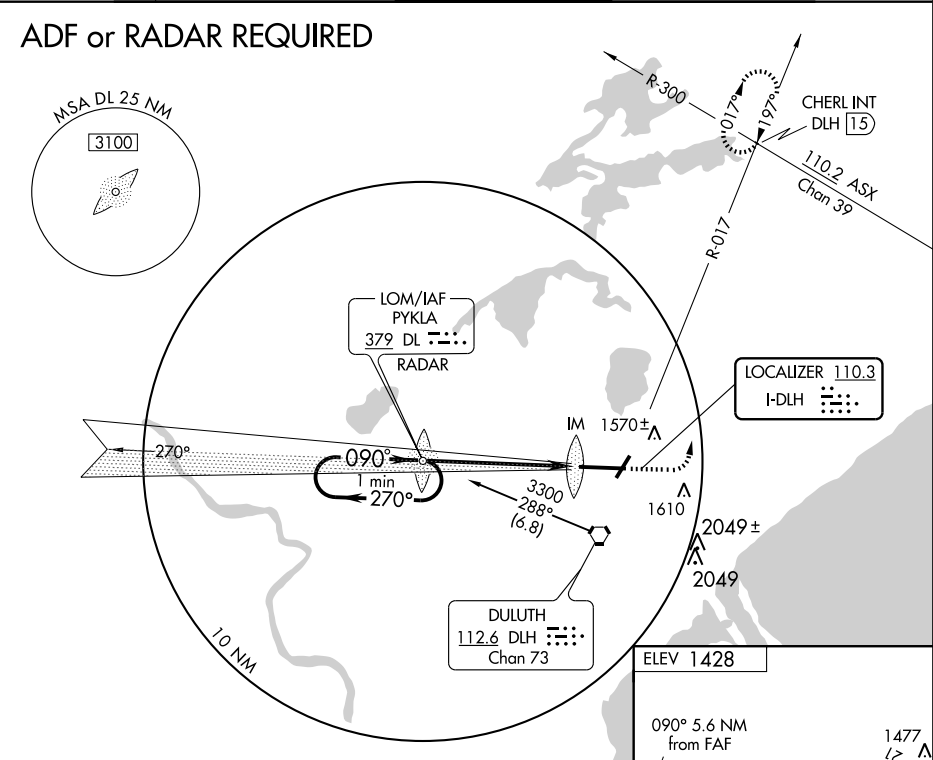
ASR

Cat E Circling not authorized southeast of Runways 3 and 27.

ALSF-2

MISSED APPROACH: Climb to 3000 then climbing left turn to 4500 via DLH R-017 to CHERL Int/DLH 15 DME and hold.

ATIS 124.1 270.1	DULUTH APP CON ★ 125.45 255.9	DULUTH TOWER 118.3 257.8	GND CON 121.9 348.6
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CATEGORY	A	B	C	D	E
S-ILS 9	1628/18 200 (200-½)				1628/24 200 (200-½)
S-LOC 9	1880/24 452 (500-½)	1880/40 452 (500-¾)	1880/50 452 (500-1)		
CIRCLING	1920-1 492 (500-1)	1920-1½ 492 (500-½)	1980-2 552 (600-2)		

FAF to MAP 5.6 NM					
Knots	60	90	120	150	180
Min:Sec	5:36	3:44	2:48	2:14	1:52

LOC I-DLH <u>110.3</u>	APP CRS 090°	Rwy Idg 10162 TDZE 1428 Apt Elev 1428
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ILS RWY 9 (CAT II)

DULUTH INTL (DLH)



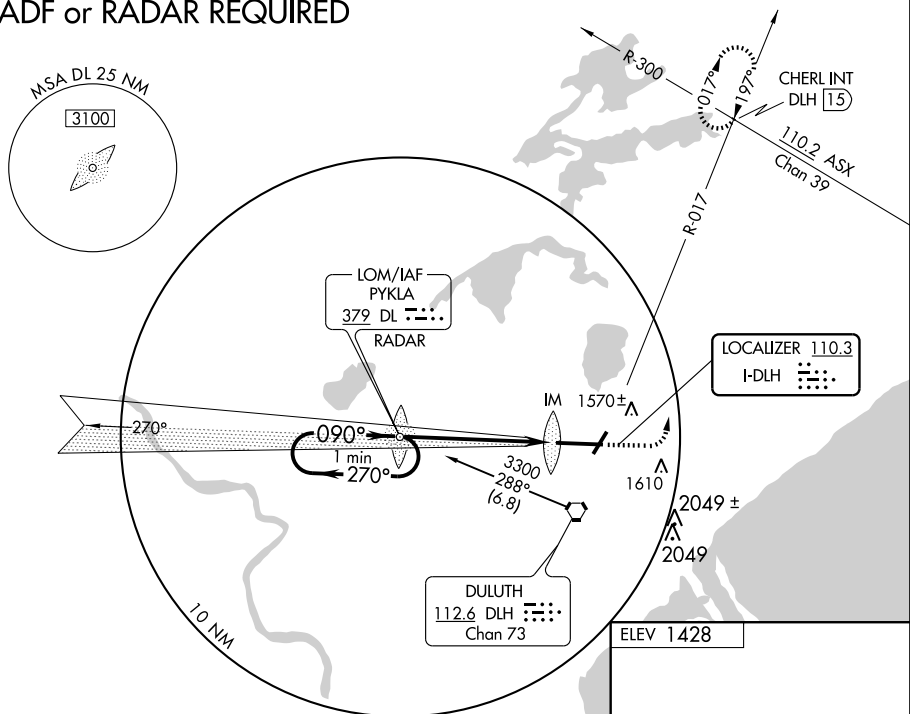
ALSF-2



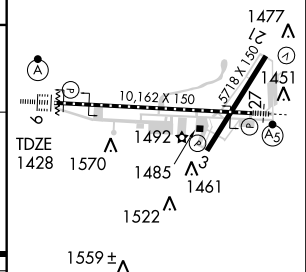
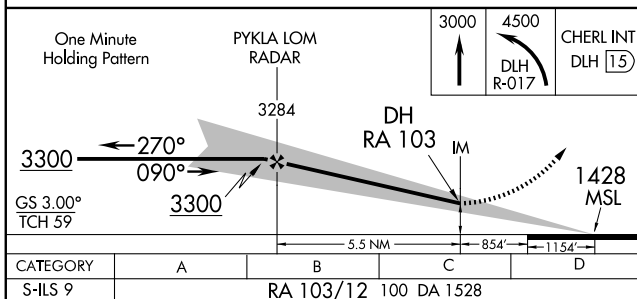
MISSED APPROACH: Climb to 3000 then climbing left turn to 4500 via DLH R-017 to CHERL Int/DLH 15 DME and hold.

ATIS 124.1 270.1	DULUTH APP CON ★ 125.45 255.9	DULUTH TOWER 118.3 257.8	GND CON 121.9 348.6
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ADF or RADAR REQUIRED



NC-1. 17 DEC 2009 to 14 JAN 2010



CATEGORY II ILS - SPECIAL AIRCREW
& AIRCRAFT CERTIFICATION REQUIRED

TDZ/CL Rwy 9 and 27
REIL Rwy 3 and 21
HIRL Rwy 3-21 and 9-27

WAAS CH 90502 W09A	APP CRS 090°	Rwy Idg 10162 TDZE 1428 Apt Elev 1428
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RNAV (GPS) RWY 9
DULUTH INTL (DLH)

ASR DME/DME RNP-0.3 NA. Circling NA for Cat. E SE of Rwy 3 and 27.
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F)
or above 46°C (115°F).
For inoperative ALSF-2, increase LPV Cat. E visibility to $\frac{3}{4}$, LNAV/VNAV all
Cats visibility to $\frac{1}{2}$ and LNAV Cat. E visibility to $\frac{1}{2}$.

ALSF-2



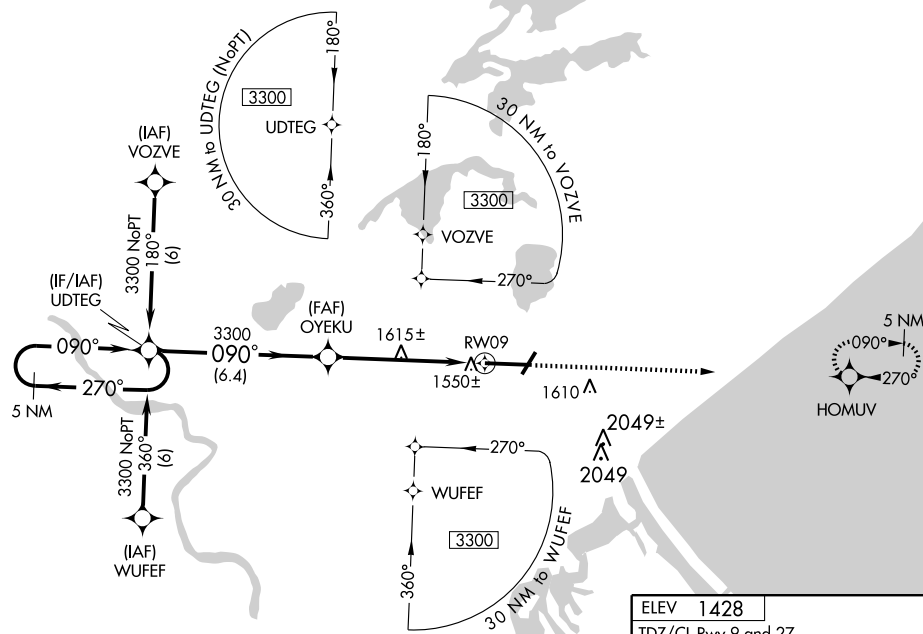
MISSED APPROACH: Climb to 4000 direct HOMUV and hold.

ATIS
124.1 270.1

DULUTH APP CON★
125.45 255.9

DULUTH TOWER
118.3 257.8

GND CON
121.9 348.6





ELEV	1428
TDZ/CL Rwy 9 and 27	
REIL Rwy 3 and 21	
HIRL Rwy 3-21 and 9-27	

VGSI and RNAV glidepath not coincident.

5 NM
Holding Pattern

DTEG

QYFKU

4000	HOMUV
	

* LNAV only

3300 —
GS 3.00°
TCH 59

*1.3 NM to
RW09

A horizontal line representing a DNA molecule is divided into three segments by two vertical tick marks. Below the line, double-headed arrows indicate the lengths of the segments: 6.4 nm for the first segment, 4.3 nm for the second segment, and 1.3 nm for the third segment.

	B	C	
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CATEGORY	A	B	C	D	E
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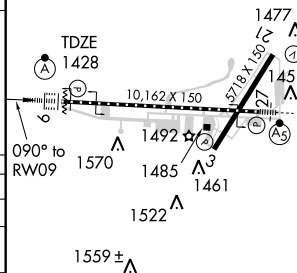
LPV	DA	1628/24 200 (200-½)
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LNAV/ VNAV	DA	1860/50	432 (500-1)
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YNAV			
		1880/40	

LNAV MDA	1880/24 452 (500- $\frac{1}{2}$)	1880/40 452 (500- $\frac{3}{4}$)	1880/50 452 (500-1)
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CIRCUING	1920-11½ 492 (500-11½)	1980-2 552 (600-2)
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WAAS CH 50502 W27A	APP CRS 270°	Rwy Idg 10162 TDZE 1421 Apt Elev 1428
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RNAV (GPS) RWY 27

DULUTH INTL (DLH)

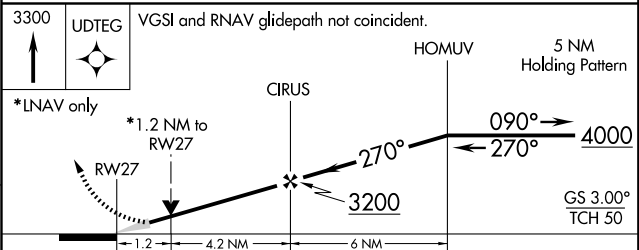
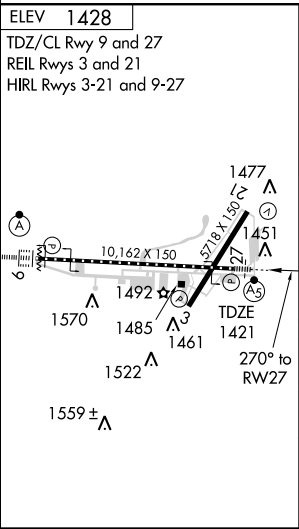
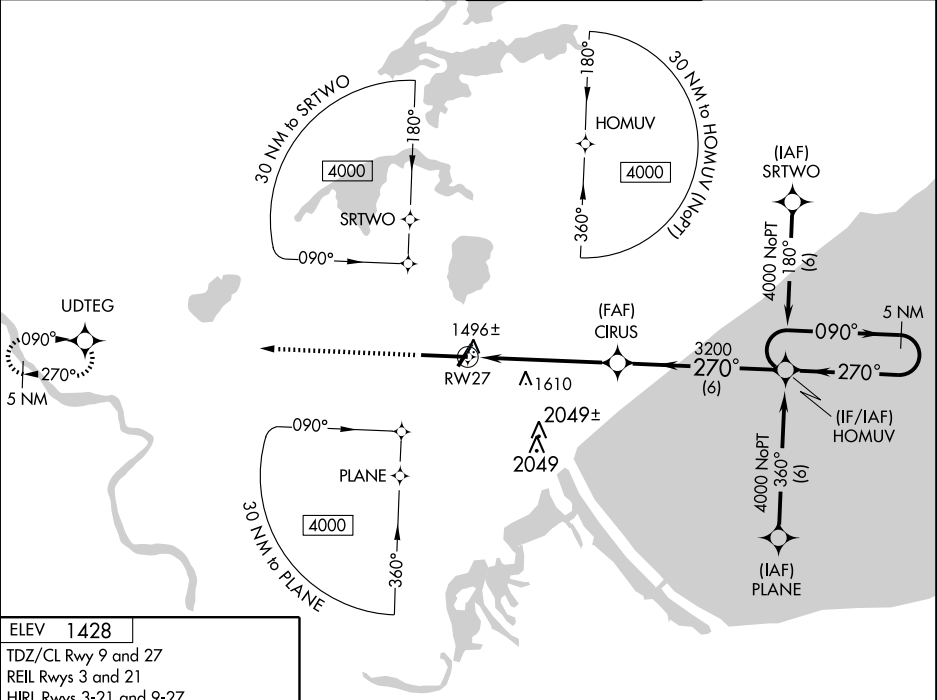
ASR

DME/DME RNP- 0.3 NA. Circling NA for Cat. E SE of Rwy 3 and 27.
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (115°F).
For inoperative MALSR, increase RVR Cat. E visibility to RVR 4000, LNAV/VNAV Cat. E visibility to RVR 6000, and LNAV Cat. E visibility to 1¾.

MALSR

MISSED APPROACH: Climb to 3300 direct UDTEG and hold.

ATIS 124.1 270.1	DULUTH APP CON * 125.45 255.9	DULUTH TOWER 118.3 257.8	GND CON 121.9 348.6
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CATEGORY	A	B	C	D	E
LPV DA	1671/24 250 (300-½)				
LNAV/VNAV DA	1746/40 325 (400-¾)				
LNAV MDA	1900/24	479 (500-½)	1900/40 479 (500-¾)	1900/50 479 (500-1)	1900/60 479 (500-1½)
CIRCLING	1920-1¼	492 (500-1¼)	1920-1½ 492 (500-1½)	1980-2	552 (600-2)

TACAN LKI
 Chap. 11

APCH CRS
082°

Rwy Idg	10,162
TDZE	1428
Arpt Elev	1428

AL-125 [USAF]

DULUTH INTL (KDLH)

* Category E not authorized SE Rwy 3 and Rwy 27.



MISSED APPROACH: Climb to 2500 then climbing right turn to 4000 via LKI R-099 to MILOD 15 DME and hold.

ATIS
124.1 270.1

DULUTH APP CON
125.45 255.9

DULUTH TOWER
118.3 257.8

GND CON
121.9 348.6

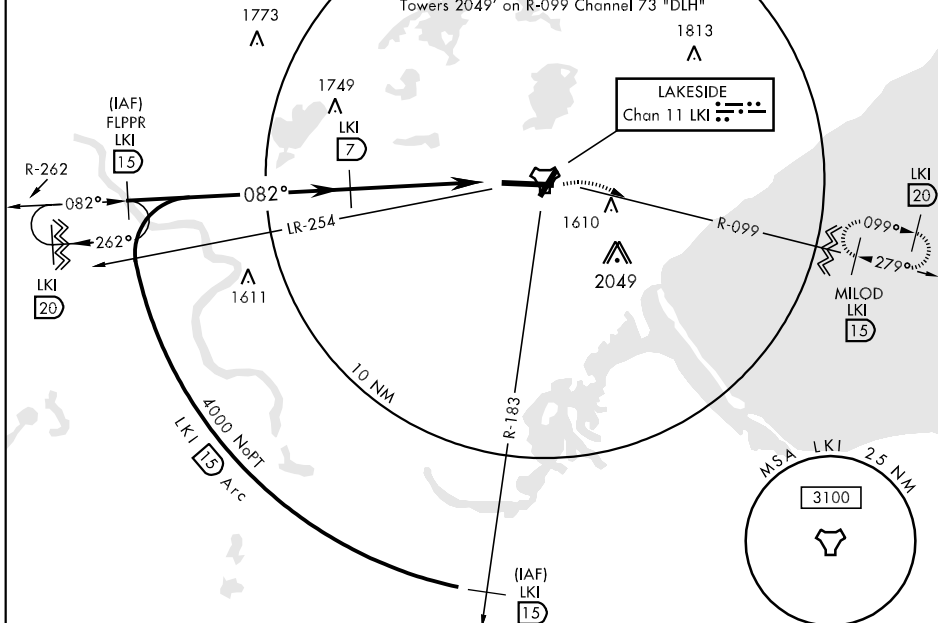
ASR

RADAR REQUIRED

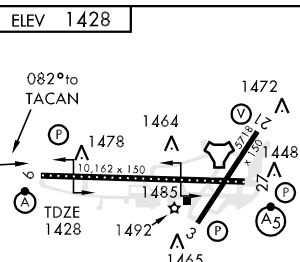
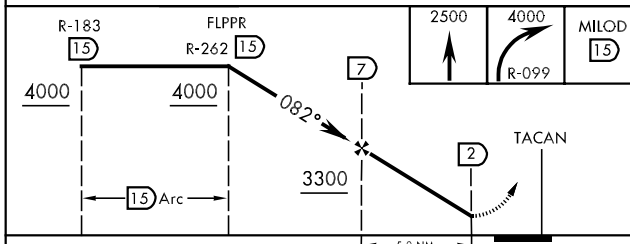
CAUTION: Do not select Channel 73

"DLH" for Channel 11 "LKI".

Towers 2049' on R-099 Channel 73 "DLH"



EMERG SAFE ALT 100 NM 4100



CATEGORY	A		B		C		D		E	
S-9	1880/24	452 (500-½)	1880/40	452 (500-¾)	1880/50	452 (500-1)				
CIRCLING *	1920-1	492 (500-1)	1920-1½	492 (500-1½)	1980-2	552 (600-2)				
S-ASR 9	1880/24	452 (500-½)	1880/40	452 (500-¾)	1880/50	452 (500-1)				

TDZL/CL Rwy 9
REIL Rwy 3 and 21
HIRL Rwy 3-21 and 9-27

TACAN LKI Chan 11	APCH CRS 279°	Rwy Idg TDZE 1421 Arpt Elev 1428
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AL-125 [USAF]

DULUTH INTL (KDLH)

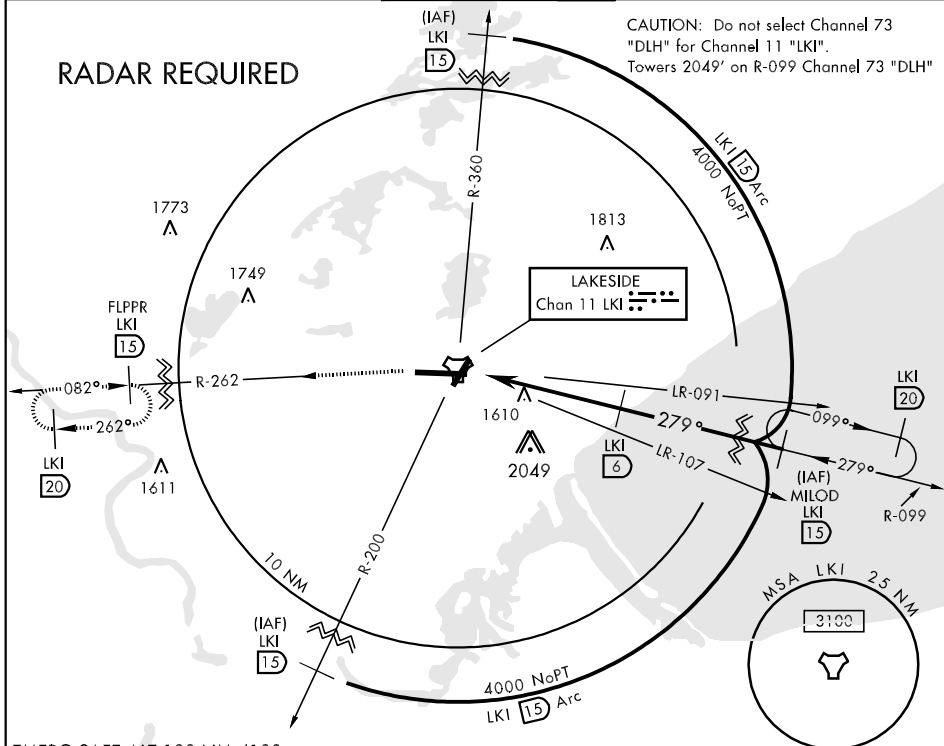
* Category E not authorized SE Rwy 3 and Rwy 27.



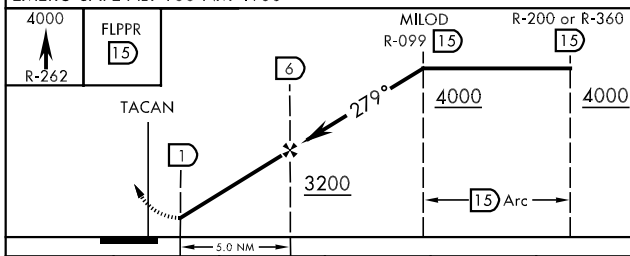
MISSED APPROACH: Climb to 4000 via R-262 to FLPPR 15 DME and hold.

ATIS 124.1 270.1	DULUTH APP CON 125.45 255.9	DULUTH TOWER 118.3 257.8	GND CON 121.9 348.6	ASR
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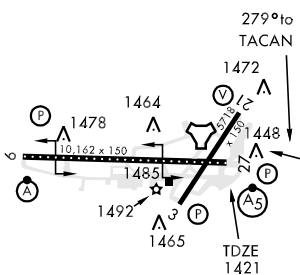
RADAR REQUIRED



EMERG SAFE ALT 100 NM 4100



ELEV 1428



CATEGORY	A	B	C	D	E
S-27	1860/24 439 (500-1/2)	1860/40 439 (500-3/4)	1860/50 439 (500-1)		
CIRCLING *	1920-1 492 (500-1)	1920-1 1/2 492 (500-1 1/2)	1980-2 552 (600-2)		
S-ASR 27	1860/24 439 (500-1/2)	1860/40 439 (500-3/4)	1860/50 439 (500-1)		

TDZL/CL Rwy 9
REIL Rwy 3 and 21
HIRL Rwy 3-21 and 9-27

VORTAC DLH <u>112.6</u> Chan 73	APP CRS 197°	Rwy Idg 5718 TDZE 1420 Apt Elev 1428
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VOR/DME or TACAN RWY 21

DULUTH INTL (DLH)

ASR

Cat E Circling not authorized southeast of Rwy 3 and 27.

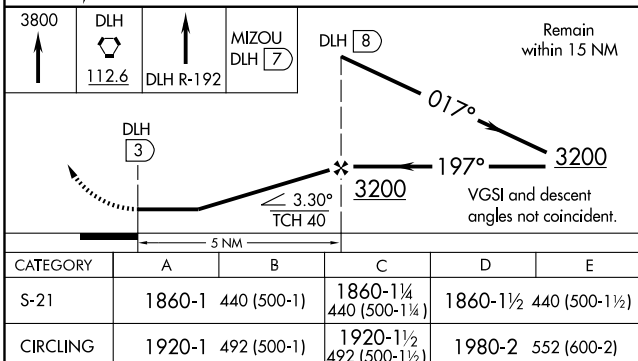
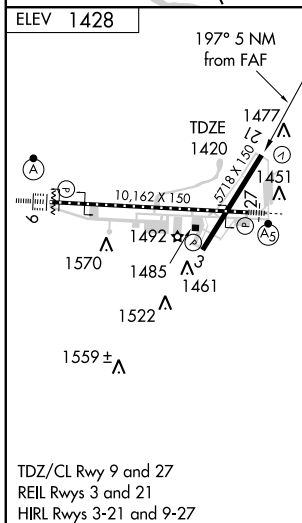
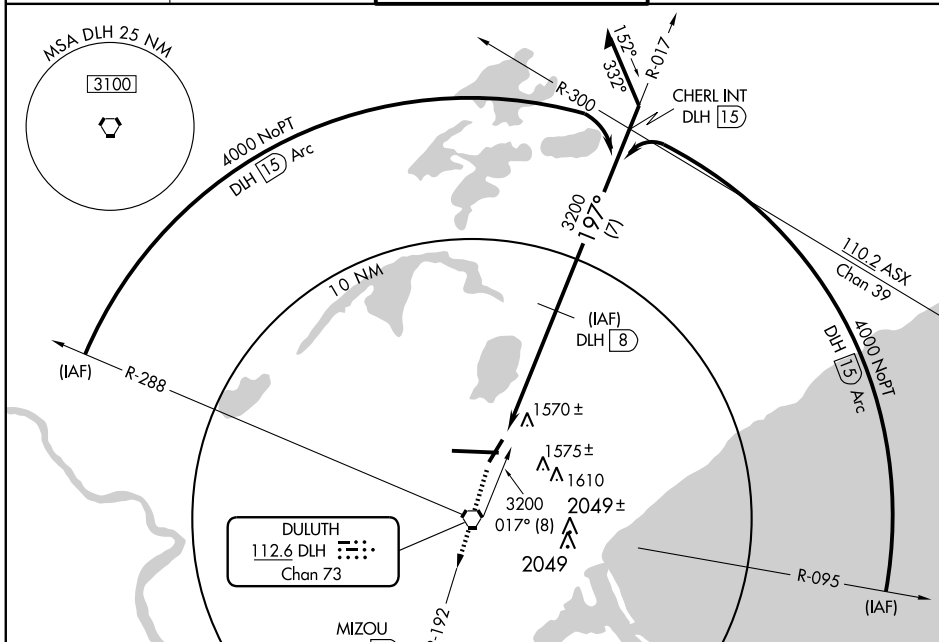
MISSED APPROACH: Climb to 3800 via direct DLH VORTAC, then DLH R-192 to MIZOU 7 DME and hold.

ATIS
124.1 270.1

DULUTH APP CON ★
125.45 255.9

DULUTH TOWER
118.3 257.8

GND CON
121.9 348.6

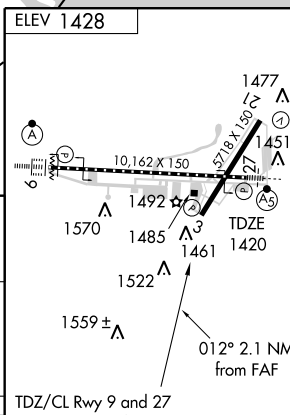
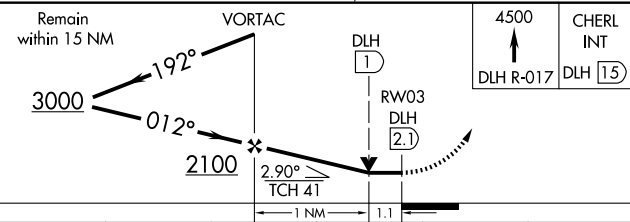
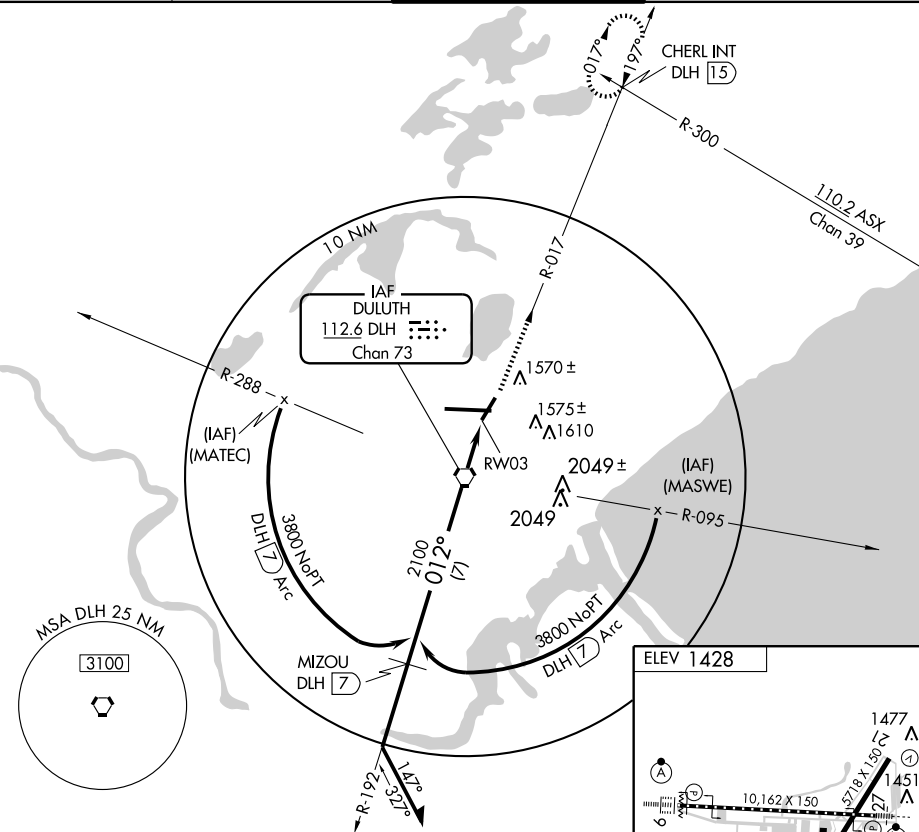


VORTAC DLH	APP CRS	Rwy Idg	5718
112.6	012°	TDZE	1420
Chan 73		Apt Elev	1428

ASR Cat E Circling not authorized southeast of Rwy 3 and 27.

MISSED APPROACH: Climb to 4500 via DLH R-017 to CHERL INT/1.5 DME and hold.

ATIS 124.1 270.1	DULUTH APP CON * 125.45 255.9	DULUTH TOWER 118.3 257.8	GND CON 121.9 348.6
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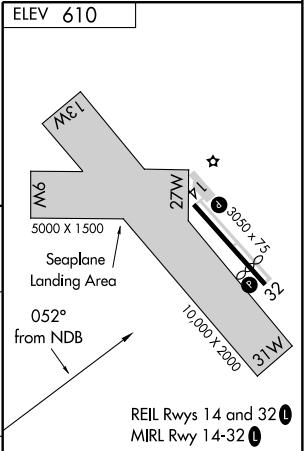
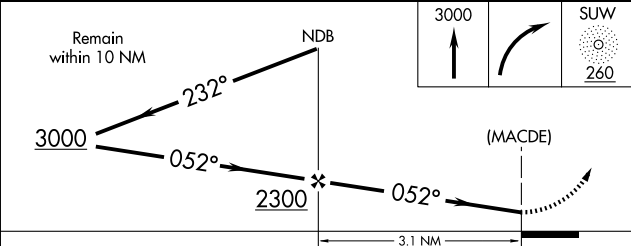
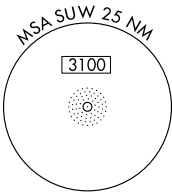
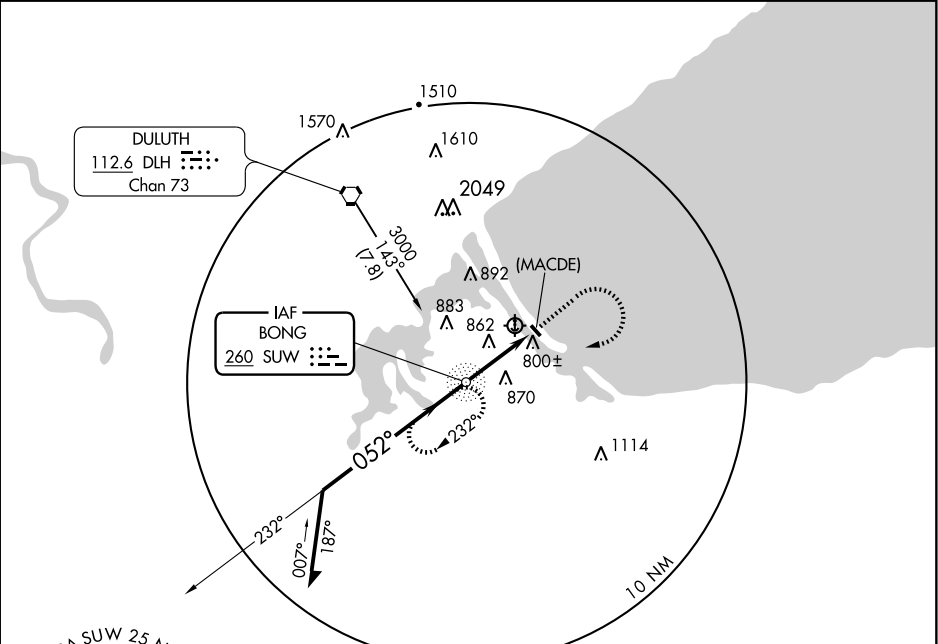
CATEGORY	A	B	C	D	E
S-3	1820-1	400 (400-1)	1820-1½	400 (400-1½)	1820-1½
CIRCLING	1920-1	492 (500-1)	1920-1½	492 (500-1½)	1980-2

FAF to MAP 2.1 NM	Knots	60	90	120	150	180
	Min:Sec	2:06	1:24	1:03	0:50	0:42

NDB	SUW	APP CRS	Rwy Idg TDZE	N/A
<u>260</u>		<u>052°</u>	Apt Elev	<u>610</u>

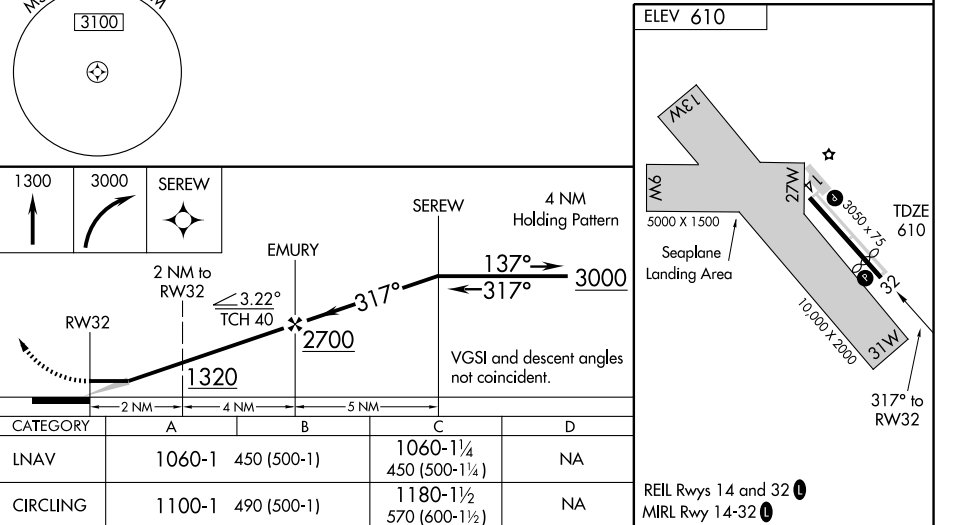
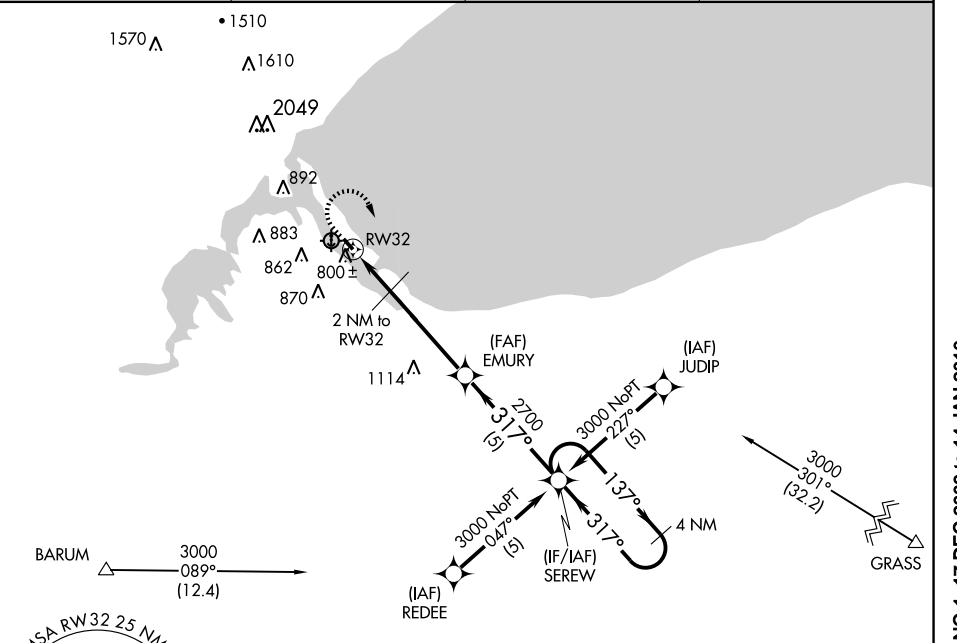
NDB or GPS-B
DULUTH/SKY HARBOR (DYT)

NA		MISSED APPROACH: Climb to 3000 then right turn direct SUW NDB and hold.	
AWOS-3 <u>119.275</u>	DULUTH APP CON ★ <u>125.45 255.9</u>	CLNC DEL <u>124.8</u>	UNICOM <u>122.7</u> (CTAF) ①



CATEGORY	A	B	C	D	FAF to MAP 3.1 NM					
CIRCLING	1180-1	570 (600-1)	1180-1½ 570 (600-1½)	NA	Knots	60	90	120	150	180
					Min:Sec	3:06	2:04	1:33	1:14	1:02

<div> <div> <div>GPS or RNP-0.3 required.</div> <div>DME/DME RNP-0.3 NA.</div> </div> <div> <div>MISSED APPROACH: Climb to 1300 then climbing right turn to 3000 direct SEREW WP and hold.</div> </div> </div>			
AWOS-3	DULUTH APP CON ★	CLNC DEL	UNICOM
119.275	125.45 255.9	124.8	122.7 (CTAF) ①



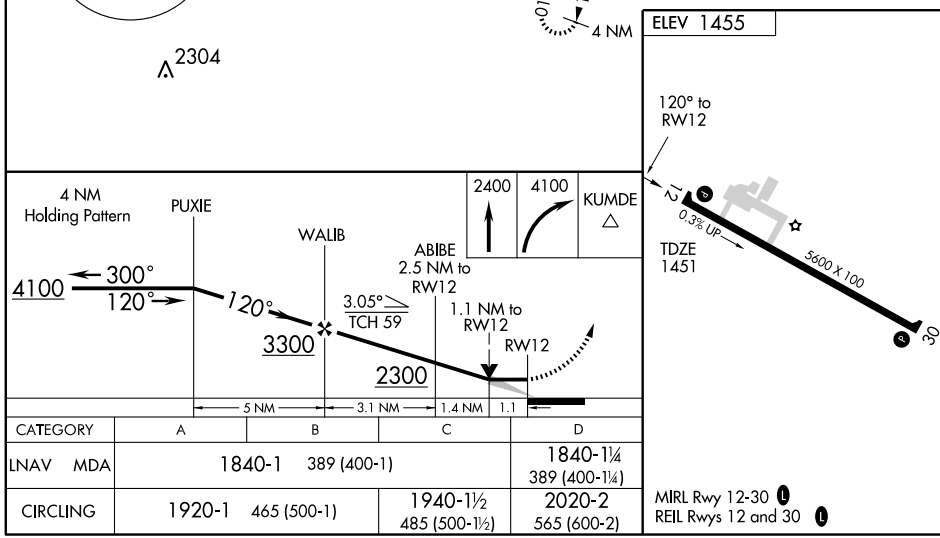
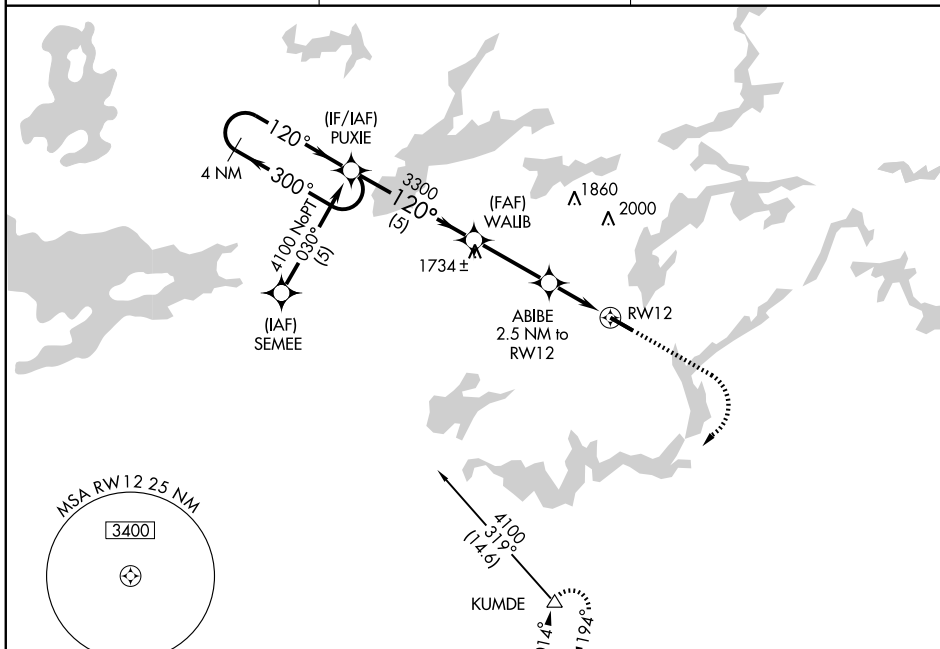
APP CRS 120°	Rwy Idg 5600
TDZE 1451	Apt Elev 1455

RNAV (GPS) RWY 12

ELY MUNI (ELO)

**NA** GPS or RNP -0.3 required. DME/DME RNP- 0.3 NA.

MISSED APPROACH: Climb to 2400 then climbing right turn to 4100 direct KUMDE WP and hold.

AWOS-3
132.025PRINCETON RADIO
122.1RUNICOM
122.8 (CTAF) 0

APP CRS	Rwy Idg	5600
300°	TDZE	1455
	Apt Elev	1455

RNAV (GPS) RWY 30

ELY MUNI (ELO)



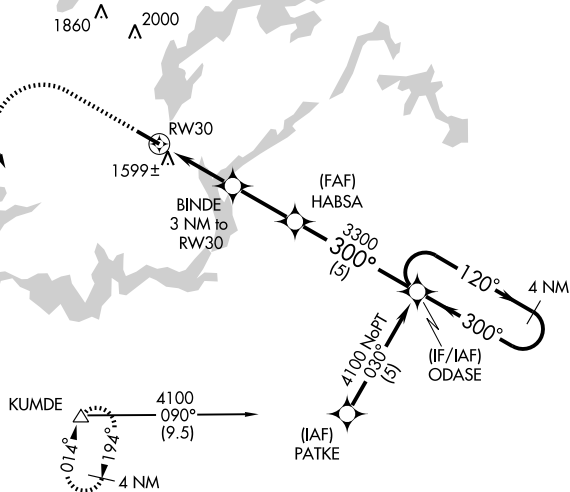
A NA GPS or RNP- 0.3 required. DME/DME RNP- 0.3 NA.

MISSED APPROACH: Climb to 2400 then climbing left turn to 4100 direct KUMDE WP and hold.

AWOS-3
132.025

PRINCETON RADIO
122.1R

UNICOM
122.8 (CTAF) **L**

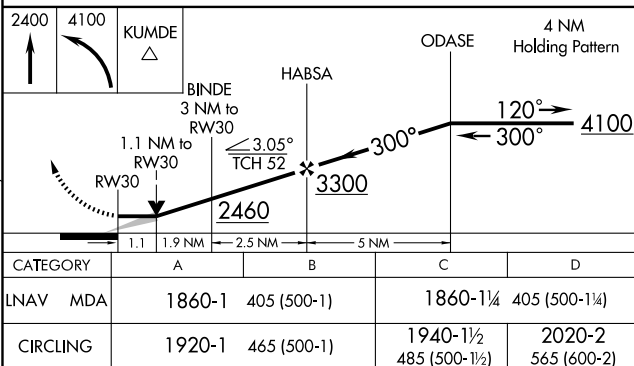
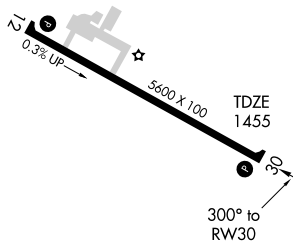


MSA RW 30 25 NM

3400

Λ
2316

ELEV 1455



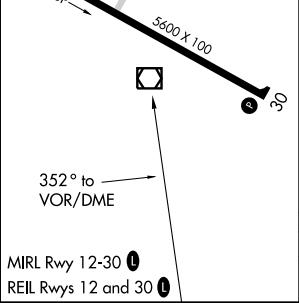
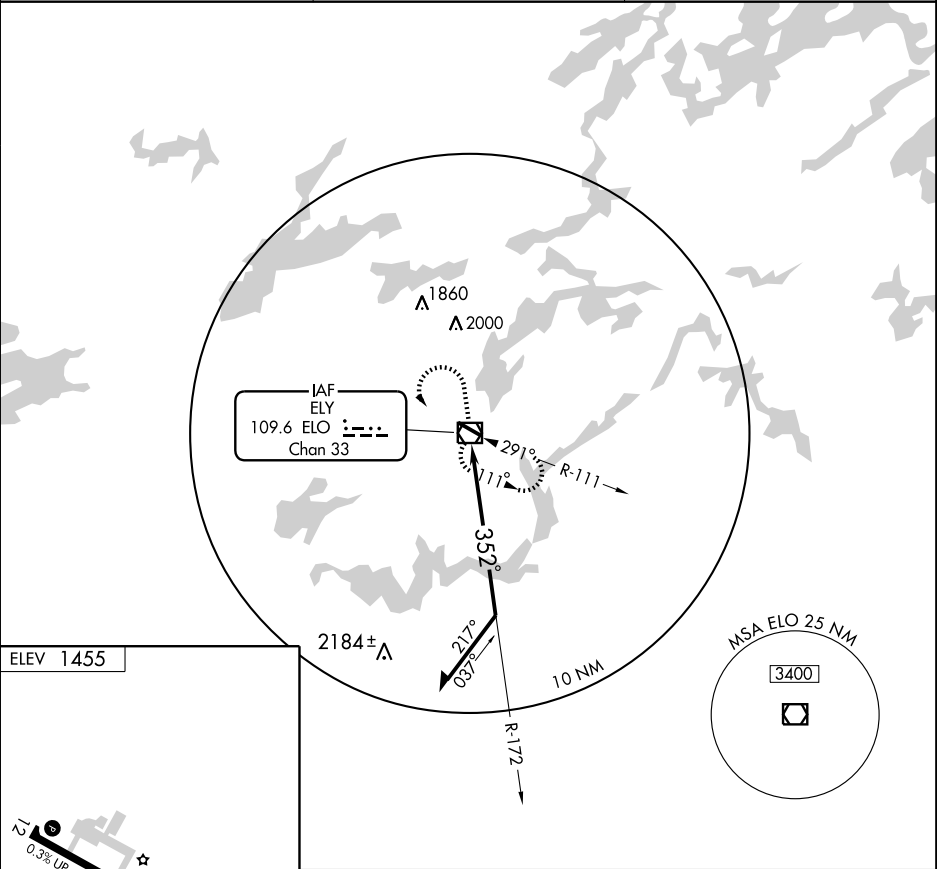
MIRL Rwy 12-30 **L**
REIL Rwy 12 and 30 **L**

VOR/DME ELO 109.6 Chan 33	APP CRS 352°	Rwy Idg TDZE Apt Elev 1455	N/A N/A 1455
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VOR-A
ELY MUNI (ELO)

	MISSED APPROACH: Climb to 3000 then climbing left turn to 3400 direct ELO VOR/DME and hold.
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AWOS-3 132.025	PRINCETON RADIO 122.1R	UNICOM 122.8 (CTAF) 0
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3000	3400	ELO 109.6	VOR/DME	Remain within 10 NM
CATEGORY	A	B	C	D
CIRCLING	2120-1	665 (700-1)	2120-1¾ 665 (700-1¾)	2120-2 665 (700-2)

VOR/DME RWY 12

ELY MUNI (ELO)

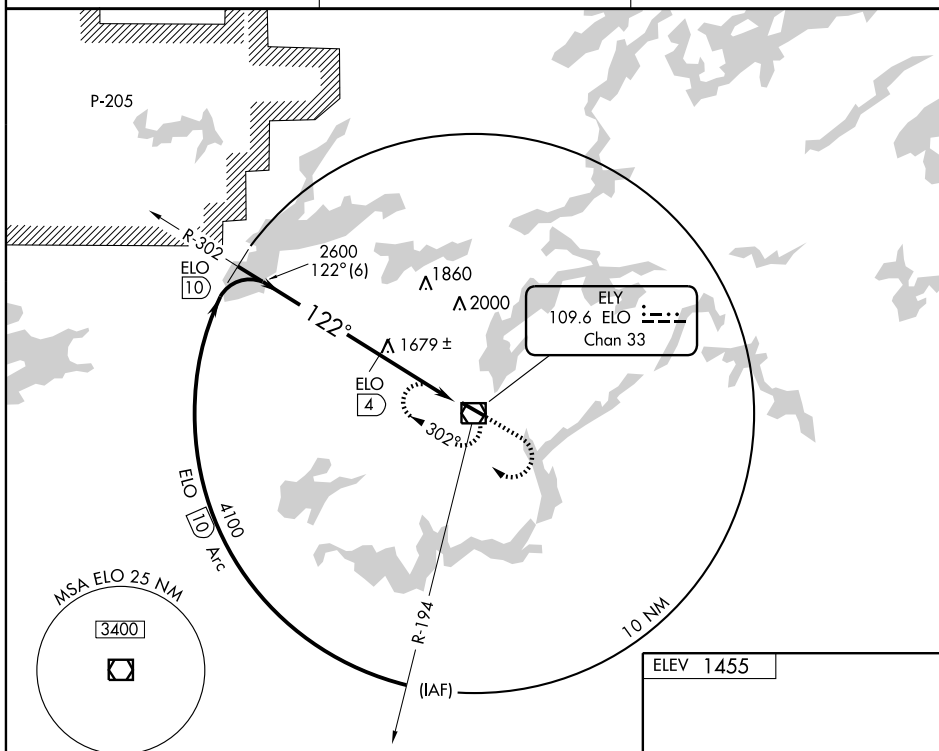
VOR/DME ELO 109.6 Chan 33	APP CRS 122°	Rwy Idg TDZE Apt Elev 5600 1451 1455
---	------------------------	--

MISSED APPROACH: Climb to 2300 then climbing right turn to 4100 direct ELO VOR/DME and hold.

AWOS-3
132.025

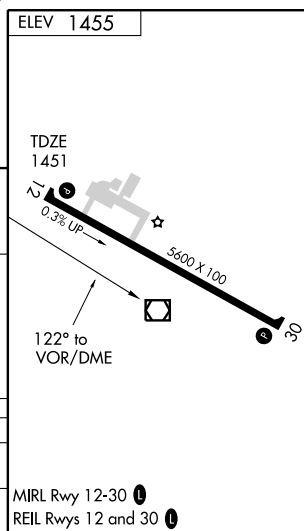
PRINCETON RADIO
122.1R

UNICOM
122.8 (CTAF) 0



Λ 2304

Procedure Turn NA				
<div> <div>4100</div> <div>ELO 10</div> <div>122°</div> <div>2600</div> <div>ELO 4</div> <div>3.02°</div> <div>TCH 59</div> <div>6 NM</div> <div>2.2 NM</div> <div>1.2</div> <div>ELO 1.8</div> <div>ELO 0.6</div> <div>2300</div> <div>4100</div> <div>ELO 109.6</div> </div>				
CATEGORY	A	B	C	D
S-12	1900-1	449 (500-1)	1900-1¼ 449 (500-1¼)	1900-1½ 449 (500-1½)
CIRCLING	1920-1	465 (500-1)	1940-1½ 485 (500-1½)	2020-2 565 (600-2)



MIRL Rwy 12-30 0
REIL Rwy 12 and 30 0

MISSED APPROACH: Climb to 2300 then climbing left turn to 4100 direct ELO VOR/DME and hold.

AWOS-3

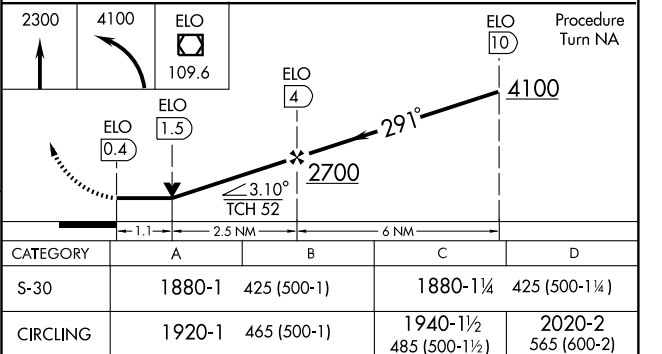
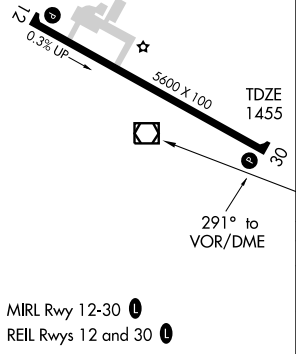
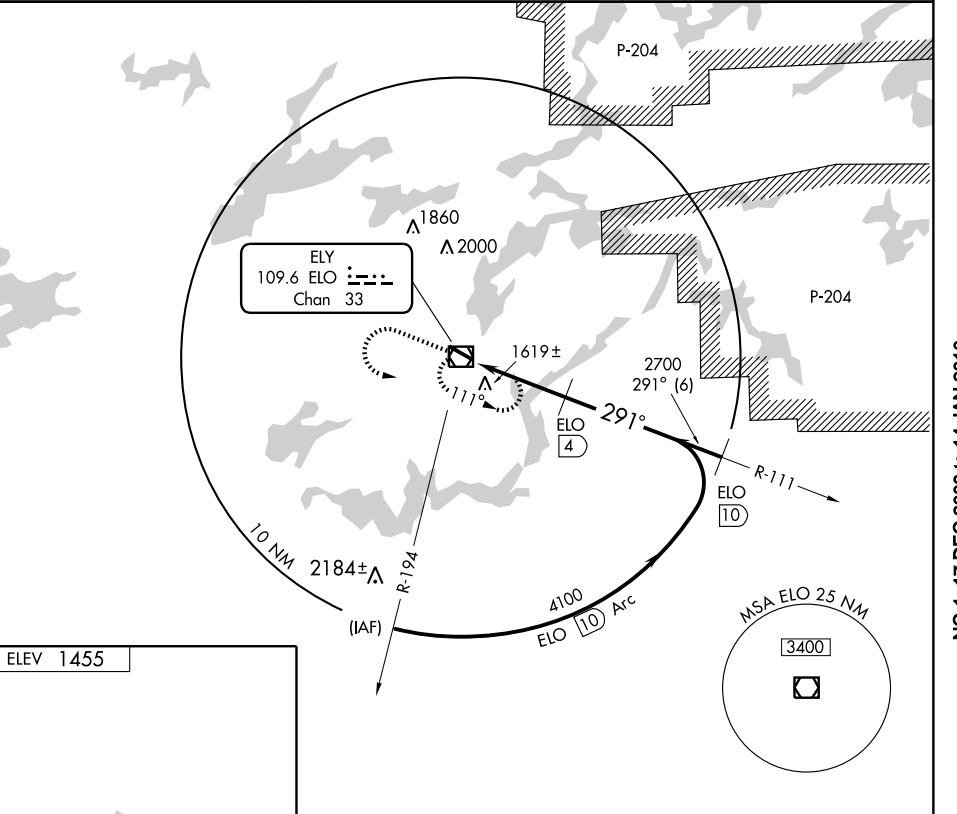
132.025

PRINCETON RADIO

122.1R

UNICOM

122.8 (CTAF) 0



NC-1. 17 DEC 2009 to 14 JAN 2010

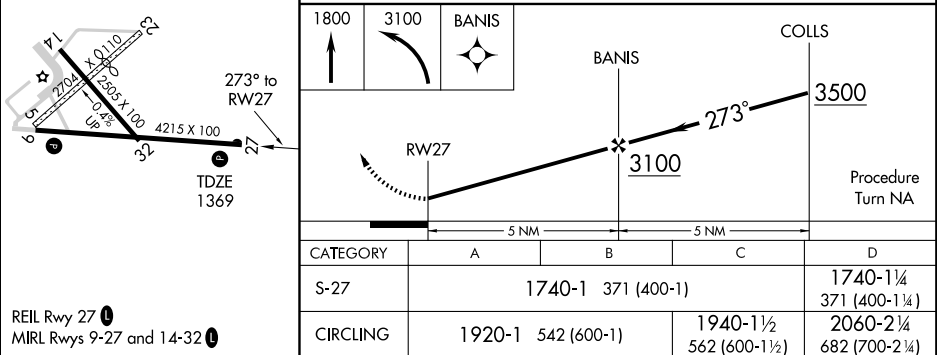
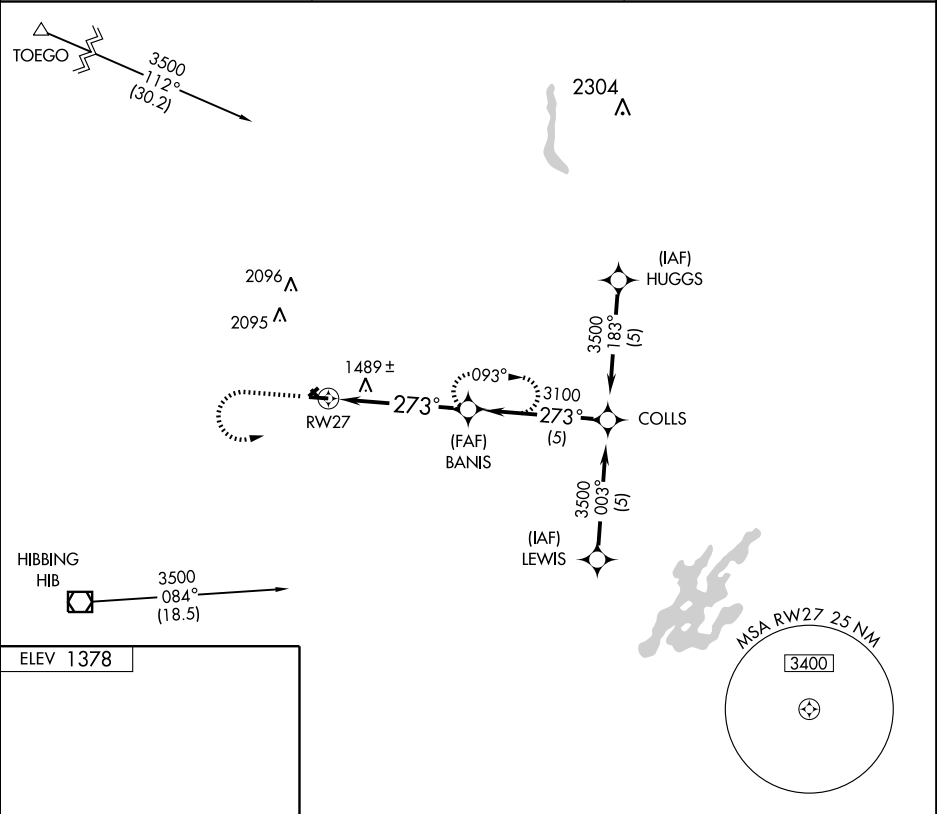
APP CRS	Rwy Idg	4215
273°	TDZE	1369
	Apt Elev	1378

GPS RWY 27

EVELETH-VIRGINIA MUNI (EVM)

<div>▼</div> <div>▲ NA</div>	MISSED APPROACH: Climb to 1800 then left climbing turn to 3100 direct BANIS WP and hold.
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AWOS-3 108.2	DULUTH APP CON ★ 125.45 255.9	UNICOM 122.7 (CTAF) ①
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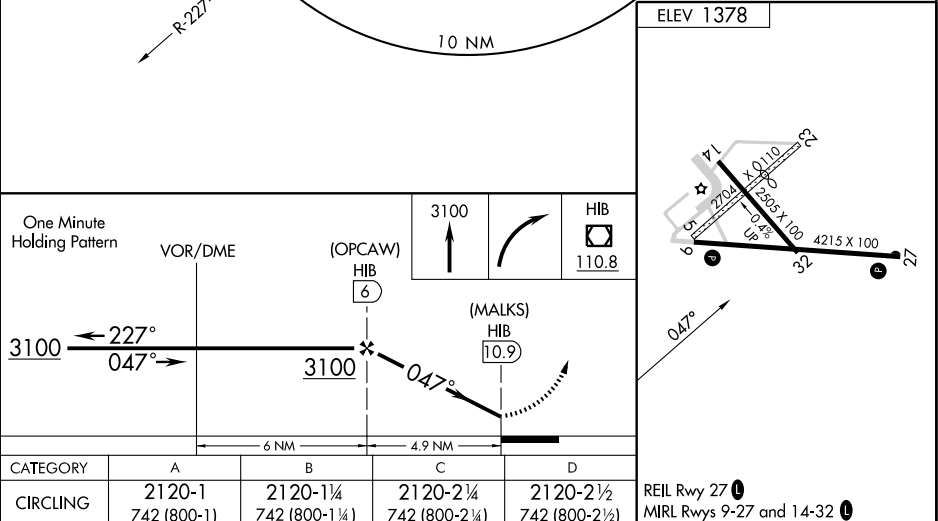
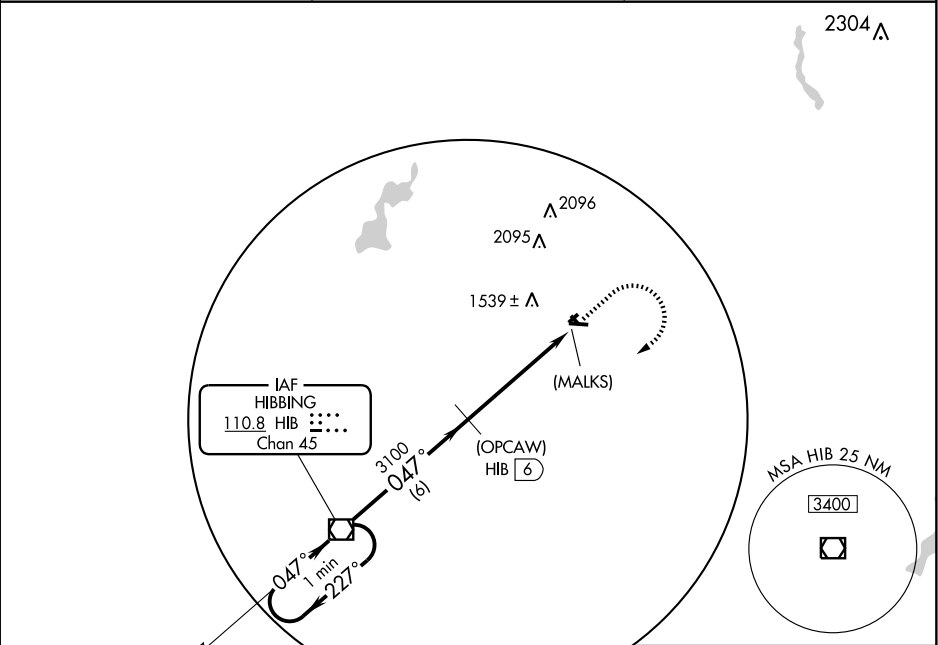


VOR/DME HIB 110.8 Chan 45	APP CRS 047°	Rwy Idg TDZE Apt Elev	N/A N/A 1378
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VOR/DME or GPS-A
EVELETH-VIRGINIA MUNI (EVM)

	MISSED APPROACH: Climb to 3100 then right turn direct HIB VOR/DME and hold.
---	--

AWOS-3 108.2	DULUTH APP CON ★ 125.45 255.9	UNICOM 122.7 (CTAF)
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VOR/DME EVM	APP CRS	Rwy Idg	4215
108.2	268°	TDZE	1369
Chan 19		Apt Elev	1378

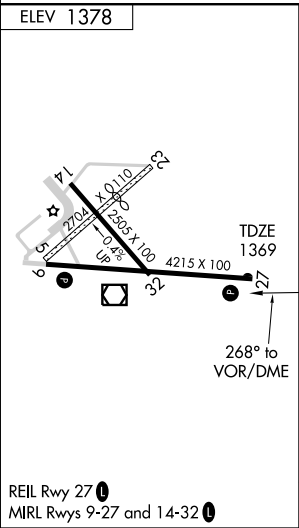
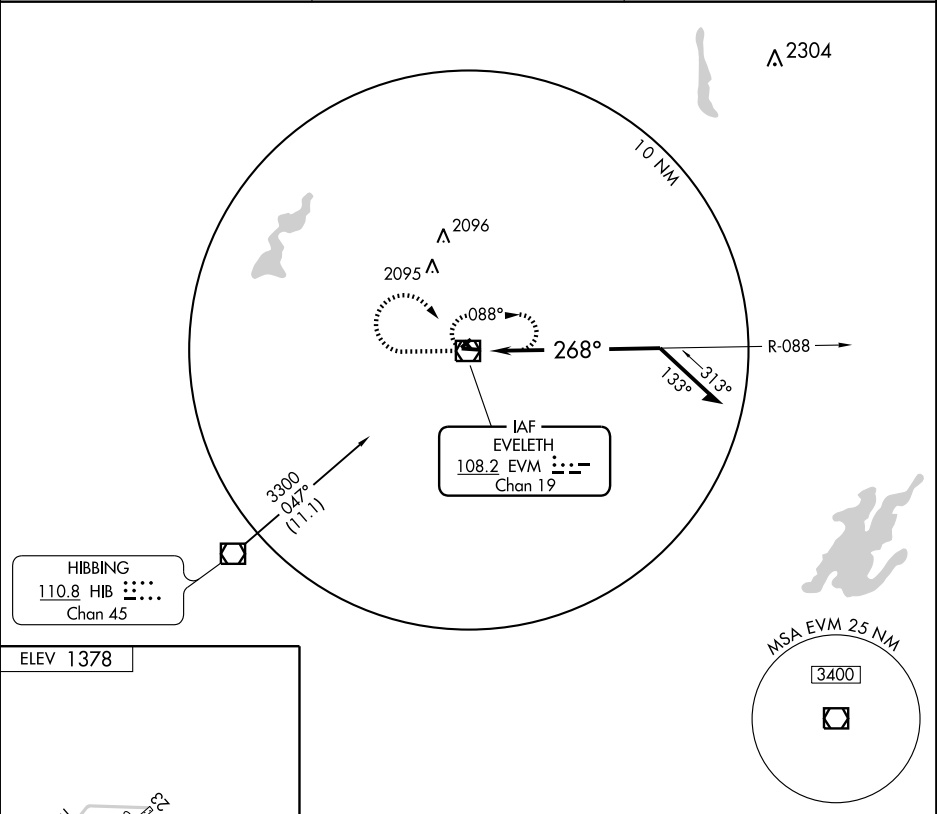
VOR RWY 27
EVELETH-VIRGINIA MUNI (EVM)



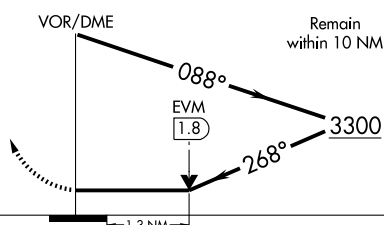
▼ If local altimeter setting not received, use Chisholm-Hibbing altimeter setting and increase all MDAs 40 feet.

▲ NA VDP NA when using Chisholm-Hibbing altimeter setting.

MISSED APPROACH: Climb to 3300 then right turn direct EVM VOR/DME and hold.

AWOS-3 108.2	DULUTH APP CON ★ 125.45 255.9	UNICOM 122.7 (CTAF) 📻
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3300 ↑		EVM  108.2				
CATEGORY	A	B	C		D	
S-27	1820-1	451 (500-1)	1820-1¼ 451 (500-1¼)		1820-1½ 451 (500-1½)	
CIRCLING	1900-1 522 (600-1)	1960-1 582 (600-1)	1980-1¾ 602 (700-1¾)		2040-2 662 (700-2)	

LOC I-FQJ <u>111.1</u>	APP CRS 310°	Rwy Idg 5505 TDZE 1162 Apt Elev 1162
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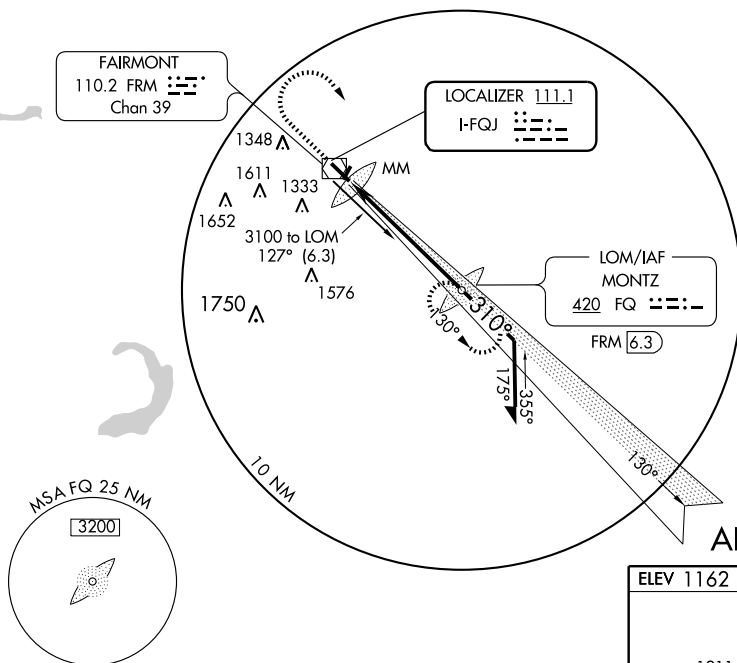
COPTER ILS RWY 31
FAIRMONT MUNI (FRM)

<p>NA</p> <p>For inoperative MALSR increase visibility to ½ mile.</p>	<p>MALSR</p>	<p>MISSED APPROACH: Climb to 2500 then climbing right turn to 3100 direct MONTZ LOM and hold.</p>
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AWOS-3
110.2

MINNEAPOLIS CENTER
127.75 257.7

UNICOM
122.8 (CTAF) **L**

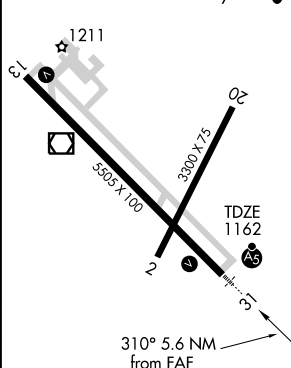


ADF REQUIRED

2500	3100	FQ
		
		420

CATEGORY	COPTER	B	C	D
S-ILS 31	1362- $\frac{1}{4}$ 200 (200- $\frac{1}{4}$)		NA	
S-LOC 31	1540- $\frac{1}{4}$ 378 (400- $\frac{1}{4}$)		NA	
CIRCLING			NA	

ELEV 1162	HIRL Rwy 13-31 L
	REIL Rwy 13 L
	MIRL Rwy 2-20 L



FAF to MAP 5.6 NM					
Knots	45	60	75	90	105
Min:Sec	7:28	5:36	4:29	3:44	3:12

LOC I-FQJ	APP CRS	Rwy Idg	5505
111.1	310°	TDZE	1162
		Apt Elev	1162

ILS or LOC RWY 31

FAIRMONT MUNI (FRM)

ADF required.
Autopilot coupled approach NA below 1468 feet MSL.

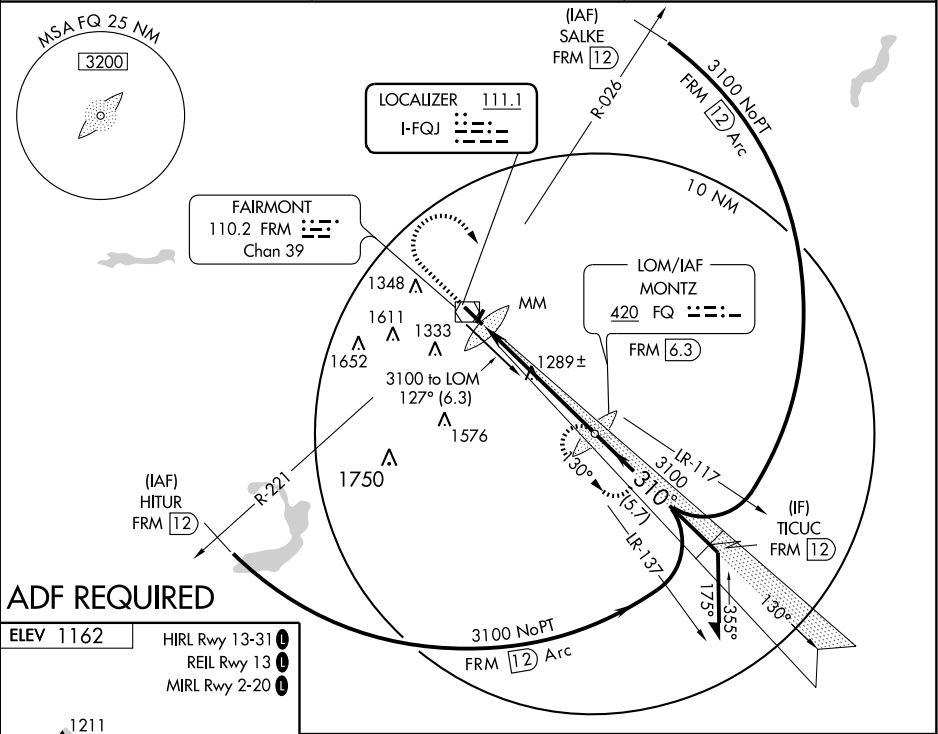
NA
S-ILS-31: Inoperative table does not apply.
S-LOC-31: For inoperative MALSR increase Cats A, B, and C visibility to 1, Cat D visibility to 1 1/4.

MALSR

A5

MISSED APPROACH: Climb to 2500 then climbing right turn to 3100 direct MONTZ LOM/ FRM 6.3 DME and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM
110.2	127.75 257.7	122.8 (CTAF) 0



ADF REQUIRED

ELEV 1162

HIRL Rwy 13-31 0
REIL Rwy 13 0
MIRL Rwy 2-20 0

1211

310° 5.6 NM from FAF

FAF to MAP 5.6 NM

Knots 60 90 120 150 180
Min:Sec 5:36 3:44 2:48 2:14 1:52

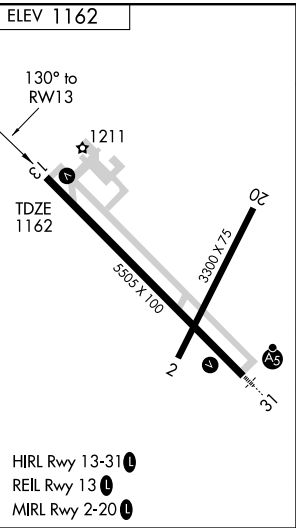
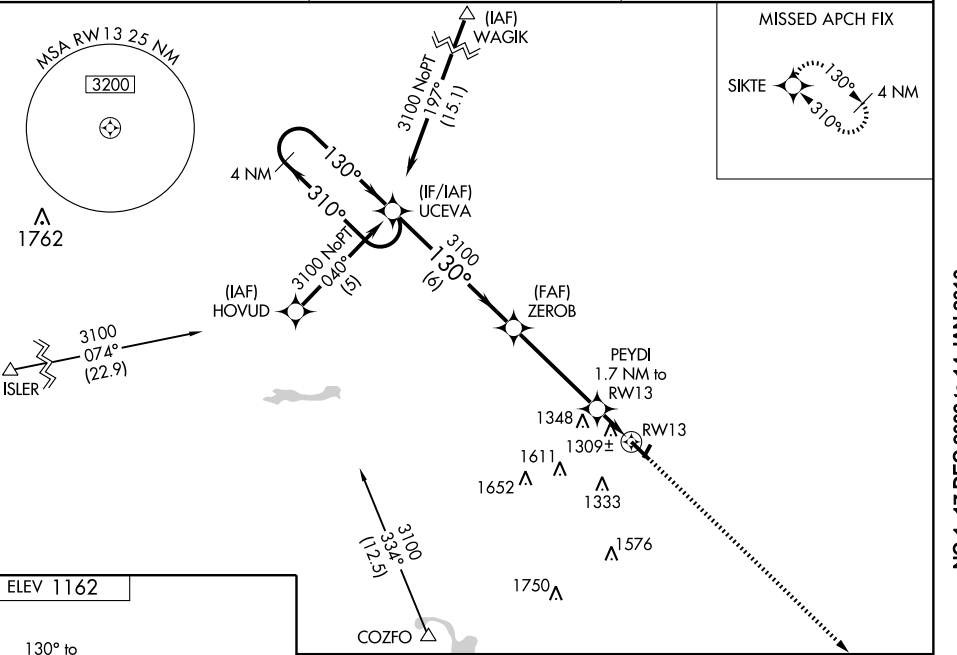
	2500	3100	FQ	LOM	Remain within 10 NM			
			420	FRM 6.3	3016	130°	310°	3100
				FRM 0.7	MM	3100	GS 3.00°	TCH 59
				0.5	5.1 NM			
CATEGORY	A	B	C	D				
S-ILS 31	1412-3/4				250 (300-3/4)			
S-LOC 31	1540-3/4				378 (400-3/4)			
CIRCLING	1640-1		478 (500-1)		1640-1 1/2	1720-2		
					478 (500-1 1/2)	558 (600-2)		

⚠ For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F).

⚠ DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use St. James altimeter setting and increase all DA 63 feet and all MDA 80 feet, increase LPV all Cats visibility and LNAV Cat C/D visibility ¼ mile. Baro-VNAV and VDP NA when using St. James altimeter setting.

MISSED APPROACH: Climb to 3100 direct SIKTE and hold.

AWOS-3 110.2	MINNEAPOLIS CENTER 127.75 257.7	UNICOM 122.8 (CTAF) 0
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4 NM Holding Pattern		UCEVA	ZEROB	PEYDI 1.7 NM to RWY 13	SIKTE
3100 ← 310°		130° →	3100	*1.1 NM to RWY 13	
GS 3.00° TCH 48				*1740	
		6 NM	4.2 NM	0.6	1.1 NM
CATEGORY	A	B	C	D	
LPV DA	1460-1 298 (300-1)				
LNAV/VNAV DA	1695-2 533 (600-2)				
LNAV MDA	1560-1 398 (400-1)			1560-1¼ 398 (400-1¼)	
CIRCLING	1640-1 478 (500-1)		1640-1½ 478 (500-1½)		1720-2 558 (600-2)

NC-1: 17 DEC 2009 to 14 JAN 2010

⚠ For inoperative MALS_R, increase LPV all Cats visibility to 1 mile and LNAV Cat D visibility to 1 ¼ mile.

⚠ For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). DME/DME RNP-0.3 NA.

When local altimeter setting not received, use St. James altimeter setting and increase all DA 63 feet and all MDA 80 feet, increase LPV and LNAV/VNAV all Cats visibility and LNAV Cat C visibility ¼ mile.

Baro-VNAV NA when using St. James altimeter setting.

For inoperative MALS_R when using St. James altimeter setting, increase LPV all Cats visibility ½ mile.

MALS_R

MISSED APPROACH: Climb to 3100 direct UCEVA and hold.

AWOS-3
110.2

MINNEAPOLIS CENTER
127.75 257.7

UNICOM
122.8 (CTAF) 1

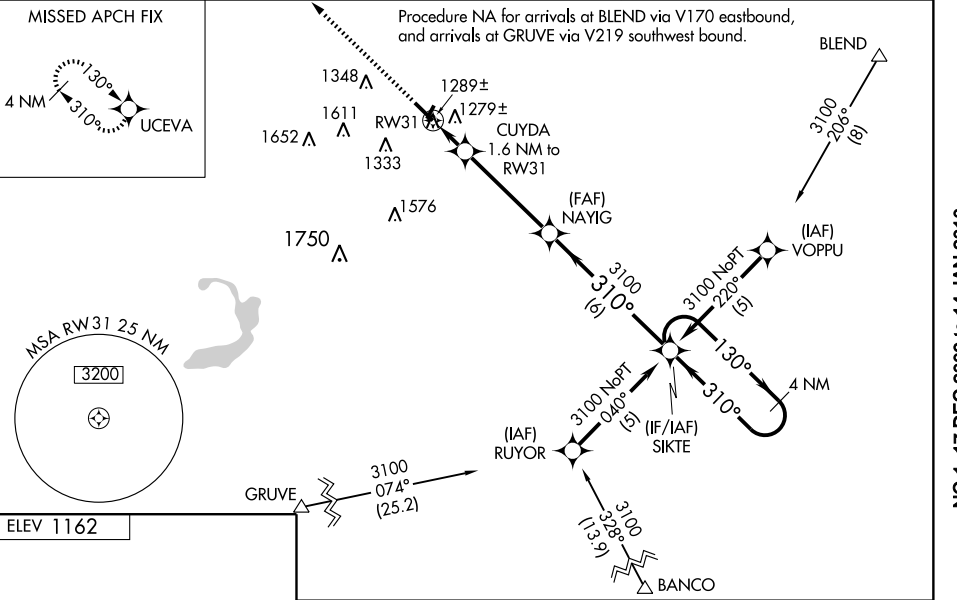


Diagram illustrating the runway layout and navigation aids for Runway 13-31 and Runway 2-20. The diagram shows the runway dimensions (5305 x 100 and 3300 x 75), the holding pattern (4 NM), and the navigation aids (UCEVA, NAYIG, SIKTE). The diagram also shows the 3100° heading and the 1720° heading.

3100

UCEVA

VGSI and RNAV glidepath not coincident.

4 NM Holding Pattern

*LNAV only

CUYDA 1.6 NM to RW31

RW31

1720*

310°

3100

130°

3100

GS 3.00° TCH 59

1.6 NM

4.2 NM

6 NM

CATEGORY	A	B	C	D
LPV DA	1467-½ 305 (400-½)			
LNAV/VNAV DA	1581-1 419 (500-1)			
LNAV MDA	1560-½ 398 (400-½)			1560-1 398 (400-1)
CIRCLING	1640-1 478 (500-1)		1640-1½ 478 (500-1½)	1720-2 558 (600-2)

HIRL Rwy 13-31

REIL Rwy 13

MIRL Rwy 2-20

310° to RW31

TDZE 1162

1211

2

3

AS

HIRL Rwy 13-31 1

REIL Rwy 13 1

MIRL Rwy 2-20 1

310° to RW31

NC-1. 17 DEC 2009 to 14 JAN 2010

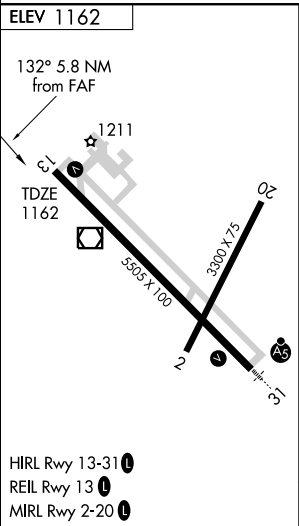
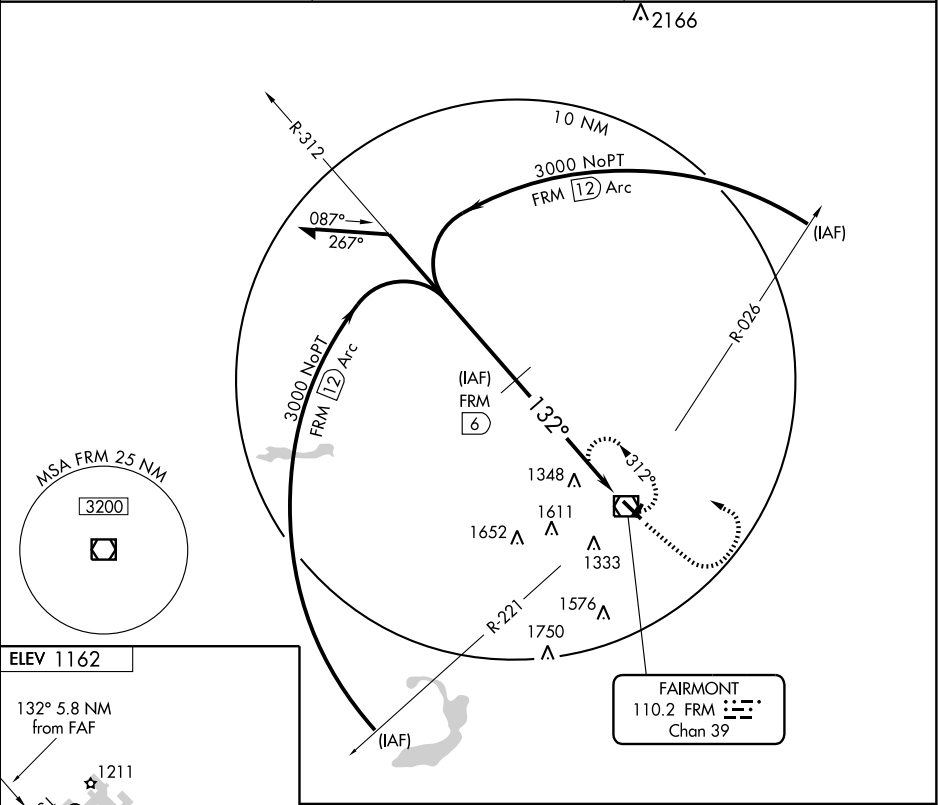
VOR/DME FRM	APP CRS	Rwy Idg	5505
110.2	132°	TDZE	1162
Chan 39		Apt Elev	1162


VOR/DME RWY 13

FAIRMONT MUNI (FRM)

<div>MISSED APPROACH: Climb to 2500 then climbing left turn to 3000 direct FRM VOR/DME and hold.</div>
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AWOS-3 110.2	MINNEAPOLIS CENTER 127.75 257.7	UNICOM 122.8 (CTAF) 1
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<div>Remain within 10 NM</div>		<div>FRM 6</div>	<div>2500 ↑</div>	<div>3000 ↖</div>	<div>FRM  110.2</div>
<div>3000</div>		<div>312°</div>	<div>FRM 1.5</div>	<div>VOR/DME</div>	
<div>132°</div>		<div>3000</div>	<div>2.93° TCH 44</div>	<div>FRM 0.5</div>	<div>↗</div>
		<div>4.5 NM</div>	<div>1 NM</div>	<div>0.3</div>	
CATEGORY	A	B	C	D	
S-13	1620-1	458 (500-1)	1620-1¼ 458 (500-1¼)	1620-1½ 458 (500-1½)	
CIRCLING	1660-1	498 (500-1)	1660-1½ 498 (500-1½)	1720-2 558 (600-2)	

T

Category D S-31 visibilities increased ¼ mile for inoperative MALSR.

Inoperative components table does not apply to Categories A, B and C.

MALSR

MISSED APPROACH: Climb to 2500 then climbing right turn to 3000 direct FRM VOR/DME and hold.

AWOS-3 110.2	MINNEAPOLIS CENTER 127.75 257.7	UNICOM 122.8 (CTAF) 1
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MSA FRM 25 NM

FAIRMONT
110.2 FRM
Chan 39

1348
1611
1652
1333
1299 ±
1576
1750

123°

305°

2800 NoPT
FRM 12 Arc

10 NM

080°
← 260°

R-025

R-221

R-125

(IAF)

(IAF) FRM 6

ELEV 1162

1211

3300 X 75

5505 X 100

2

TDZE 1162

305° 5.3 NM from FAF

HIRL Rwy 13-31

REIL Rwy 13

MRL Rwy 2-20

2500	3000	FRM 110.2	FRM 6	Remain within 10 NM
VOR/DME	FRM 1.8	FRM 1	2800	125°
0.3	0.8	4.2 NM	2.83° TCH 43	305°
CATEGORY	A	B	C	D
S-31	1560-1 398 (400-1)			
CIRCLING	1660-1 498 (500-1)		1660-1 ½ 498 (500-1½)	1720-2 558 (600-2)

NC-1. 17 DEC 2009 to 14 JAN 2010

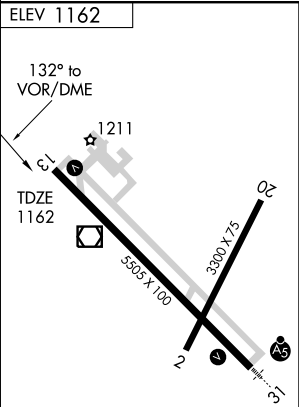
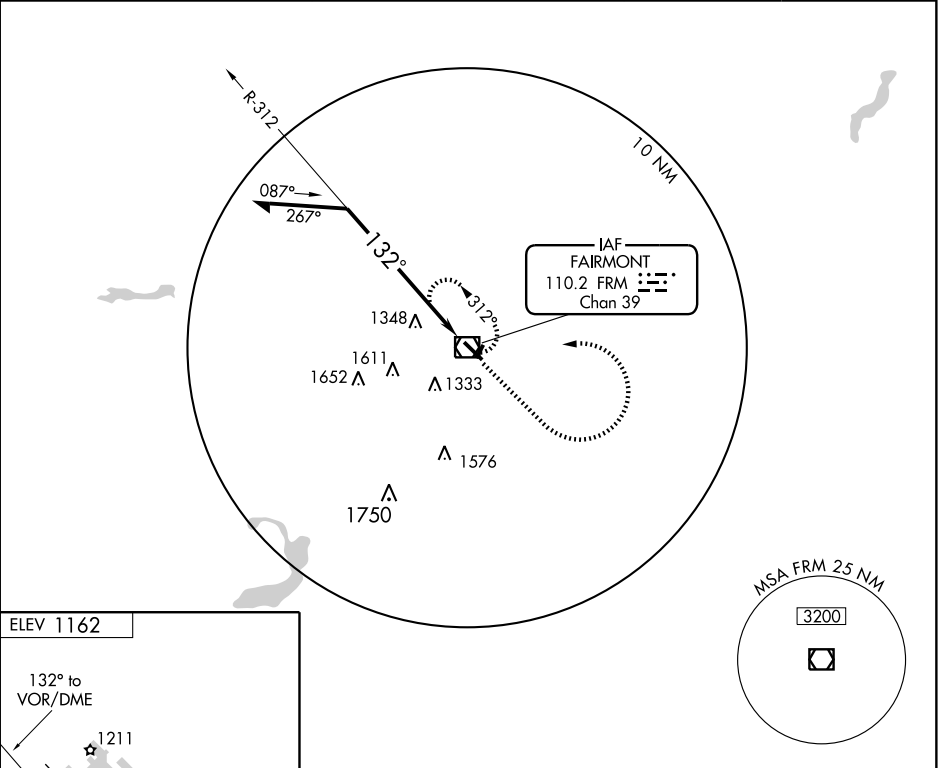
VOR/DME FRM 110.2 Chan 39	APP CRS 132°	Rwy Idg TDZE Apt Elev	5505 1162 1162
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VOR RWY 13
FAIRMONT MUNI (FRM)

▼ Visibility reduction by helicopters NA.
▲ When local altimeter setting not received, use St. James altimeter setting and increase all MDA 80 feet, increase S-13 Cat C/D visibility and circling Cat C visibility ¼ mile. VDP NA when using St. James altimeter setting.

MISSED APPROACH: Climb to 2500 then climbing left turn to 3000 direct FRM VOR/DME and hold.

AWOS-3 110.2	MINNEAPOLIS CENTER 127.75 257.7	UNICOM 122.8 (CTAF) 0
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Remain within 10 NM		VOR/DME	2500	3000	FRM 110.2
2800		312°	↑	↶	FRM 1.9
132°		1.7 NM			
CATEGORY	A	B	C	D	
S-13	1740-1	578 (600-1)	1740-1½ 578 (600-1½)	1740-1¾ 578 (600-1¾)	
CIRCLING	1740-1	578 (600-1)	1740-1½ 578 (600-1½)	1740-2 578 (600-2)	

VOR RWY 31
FAIRMONT MUNI (FRM)

VOR/DME FRM	APP CRS	Rwy Idg	5505
110.2	305°	TDZE	1162
Chan 39		Apt Elev	1162

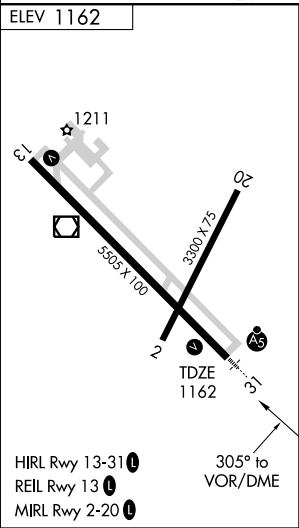
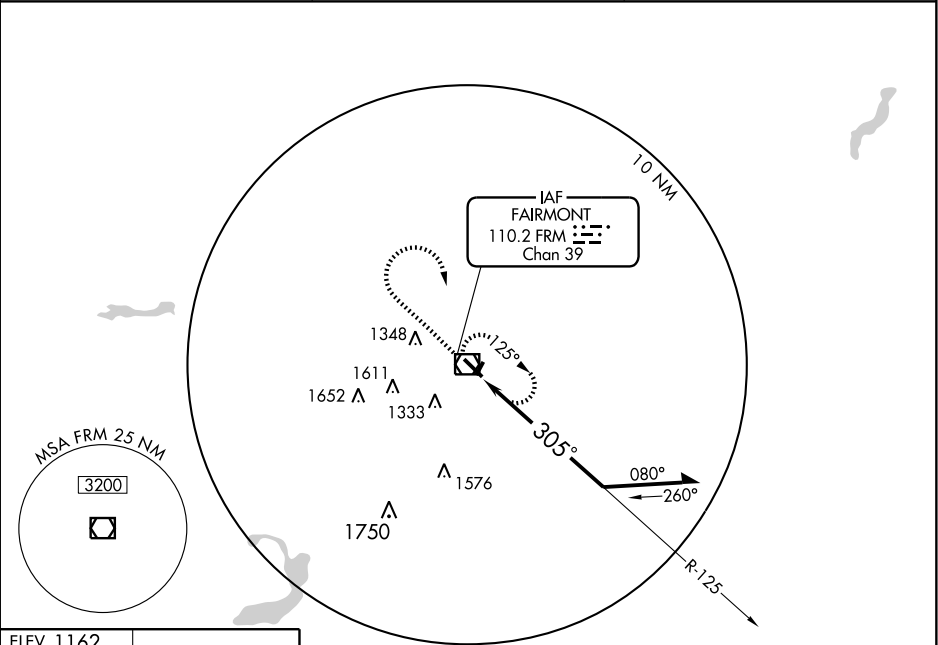
When local altimeter setting not received, use St. James altimeter setting and increase all MDA 80 feet, increase S-31 Cat C/D visibility and circling Cat C visibility ¼ mile. VDP NA when using St. James altimeter setting.

MALSR



MISSED APPROACH: Climb to 2500 then climbing right turn to 3000 direct FRM VOR/DME and hold.

AWOS-3 110.2	MINNEAPOLIS CENTER 127.75 257.7	UNICOM 122.8 (CTAF)
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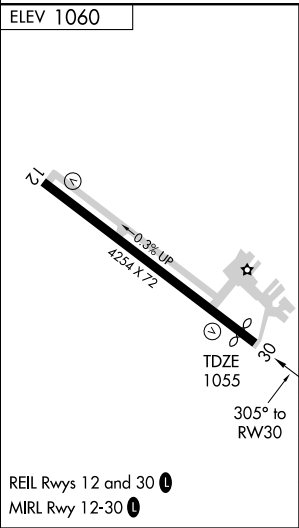
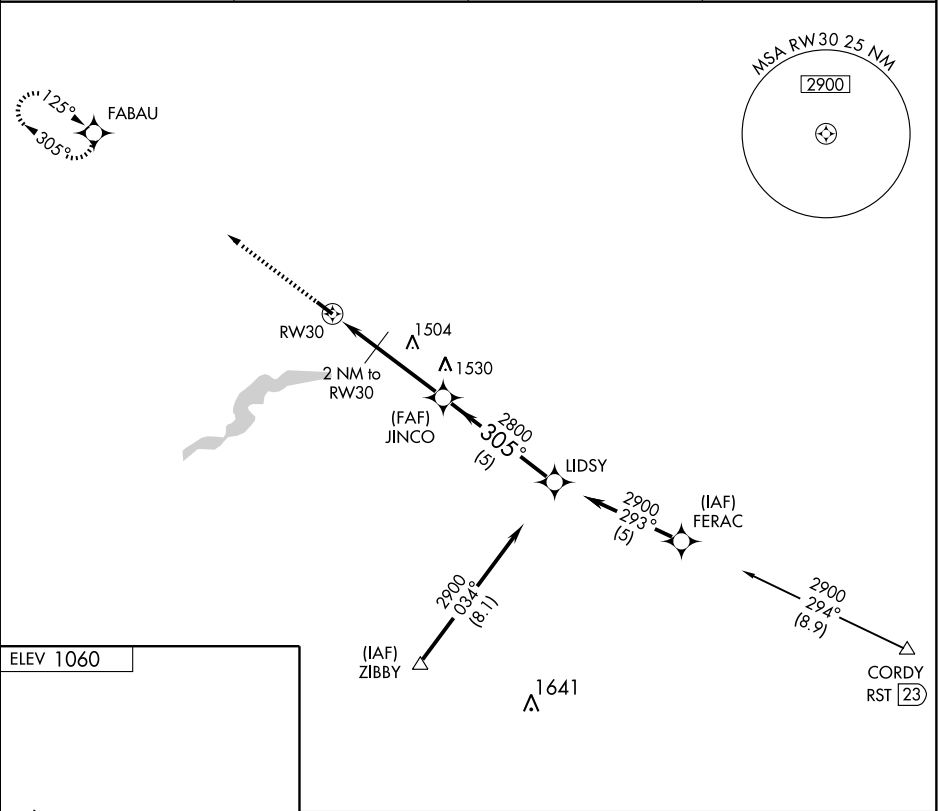
2500	3000	FRM 110.2	VOR/DME		Remain within 10 NM
↑	↷	◻	125°		
			FRM 2.2	2800	
			305°		
			1.6 NM		
CATEGORY	A	B	C	D	
S-31	1700-1/2	538 (600-1/2)	1700-1 538 (600-1)	1700-1 1/4 538 (600-1 1/4)	
CIRCLING	1700-1	538 (600-1)	1700-1 1/2 538 (600-1 1/2)	1720-2 558 (600-2)	

APP CRS	Rwy Idg	4017
305°	TDZE	1055
	Apt Elev	1060

GPS RWY 30

FARIBAULT MUNI (FBL)

NA		MISSED APPROACH: Climb to 2700 direct FABAU WP and hold.	
AWOS-3 111.2	MINNEAPOLIS APP CON 134.7 284.7	GCO 121.725	UNICOM 122.8 (CTAF) 1



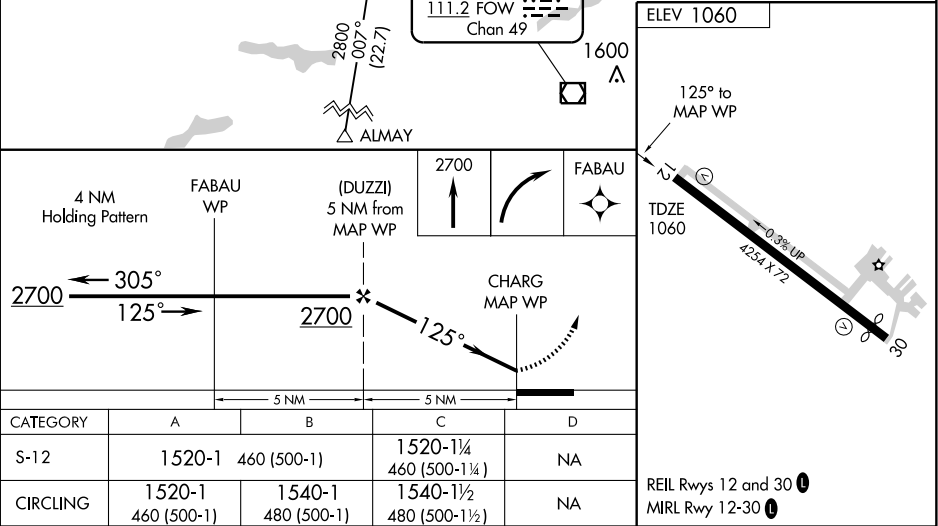
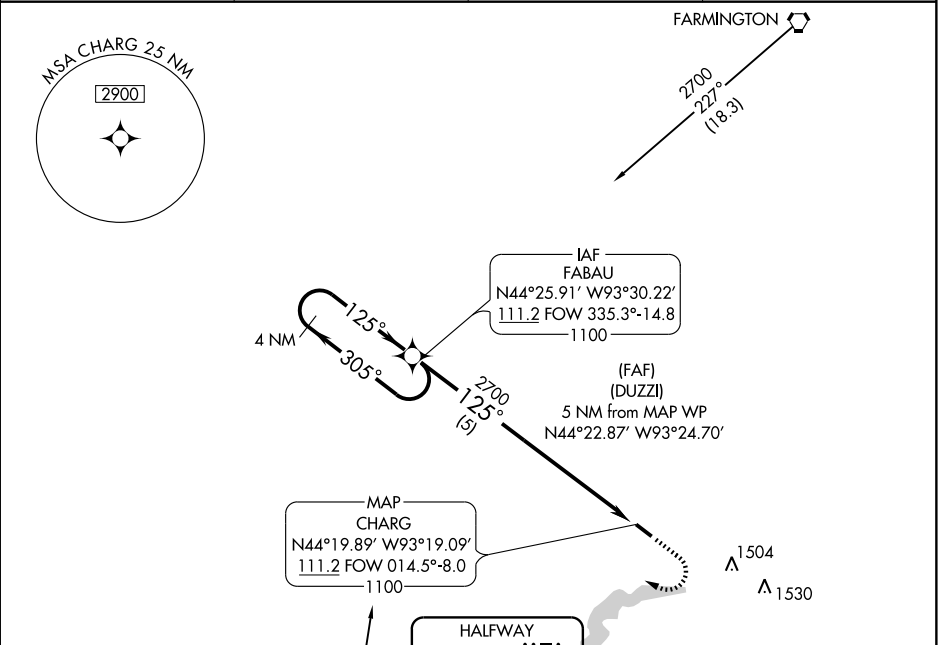
2700 FABAU		JINCO		LIDSY
2700		2800	2900	Procedure Turn NA
RW30		2 NM to RW30	3 NM	5 NM
CATEGORY	A	B	C	D
S-30	1480-1	425 (500-1)	1480-1 ¼ 425 (500-1 ¼)	NA
CIRCLING	1520-1 460 (500-1)	1540-1 480 (500-1)	1540-1 ½ 480 (500-1 ½)	NA

VOR/DME FOW	APP CRS	Rwy Idg	4254
111.2	125°	TDZE	1060
Chan 49		Apt Elev	1060

VOR/DME RNAV or GPS RWY 12

FARIBAULT MUNI (FBL)

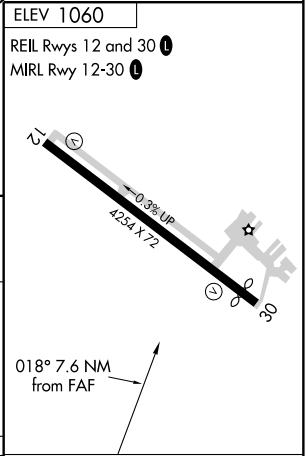
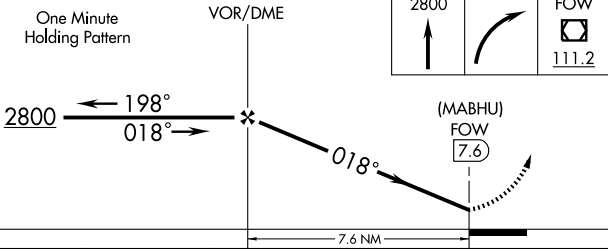
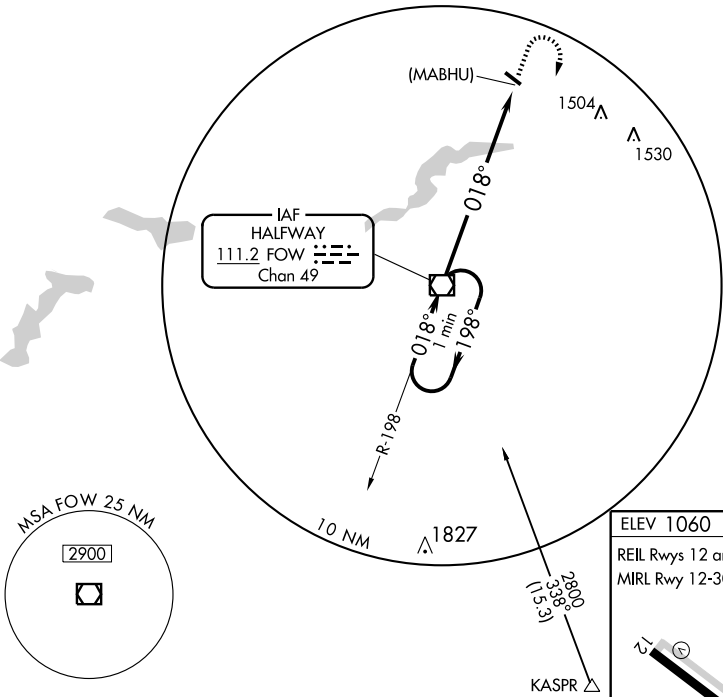
NA		MISSED APPROACH: Climb to 2700 then right turn direct FABAU WP and hold.	
AWOS-3 111.2	MINNEAPOLIS APP CON 134.7 284.7	GCO 121.725	UNICOM 122.8 (CTAF) 0



VOR or GPS-A
FARIBAULT MUNI (FBL)

VOR/DME FOW 111.2 Chan 49	APP CRS 018°	Rwy Idg TDZE Apt Elev	N/A N/A 1060
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▲ NA		MISSED APPROACH: Climb to 2800 then right turn direct FOW VOR/DME and hold.	
AWOS-3 111.2	MINNEAPOLIS APP CON 134.7 284.7	GCO 121.725	UNICOM 122.8 (CTAF) 1



CATEGORY	A	B	C	D	FAF to MAP 7.6 NM					
CIRCLING	1640-1	580 (600-1)	1640-1½ 580 (600-1½)	NA	Knots	60	90	120	150	180
					Min:Sec	7:36	5:04	3:48	3:02	2:32

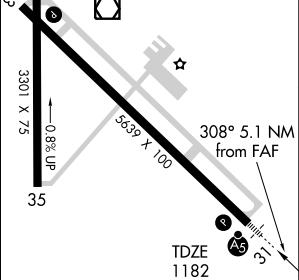
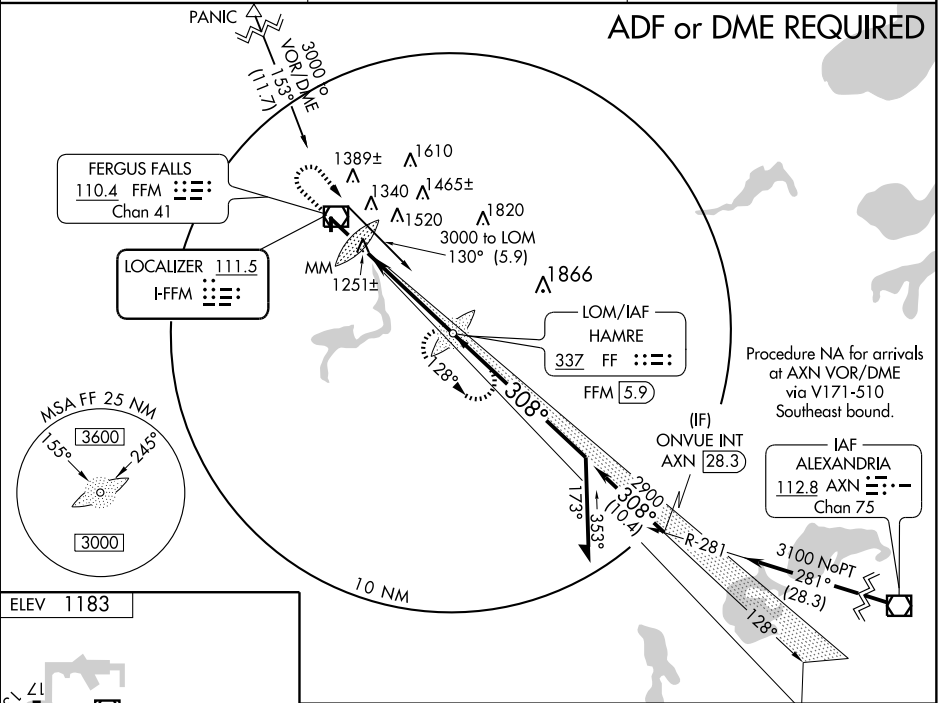
LOC I-FFM	APP CRS	Rwy Idg	5639
111.5	308°	TDZE	1182
		Apt Elev	1183

ILS or LOC RWY 31

FERGUS FALLS MUNI-EINAR MICKELSON FIELD (F'FM)

<p>⚠ When local altimeter setting not received, use Wheaton altimeter setting and increase all DA 102 feet and all MDA 120 feet, increase S-LOC 31 and Circling Cat C and D visibility ½ mile. For inoperative MALS, increase S-LOC 31 Cat D visibility ¼ mile. For inoperative MALS when using Wheaton altimeter setting, increase S-ILS 31 all Cats visibility ½ mile. GS unusable for coupled approaches below 1400.</p>	<p>MALS</p> <p>A5</p>	<p>MISSED APPROACH: Climb to 3000 then right turn direct HAMRE LOM/FFM 5.9 DME and hold.</p>
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AWOS-3 110.4	PRINCETON RADIO 122.35	UNICOM 122.8 (CTAF) 0
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REIL Rwys 13 and 35 1						S-ILS 31	1382-½ 200 (200-½)				
MIRL Rwys 13-31 and 17-35 1						S-LOC 31	1520-½ 338 (400-½)			1520-¾ 338 (400-¾)	
FAF to MAP 5.1 NM											
Knots	60	90	120	150	180		1640-1	1740-1	1740-1½	1880-2¼	
Min:Sec	5:06	3:24	2:33	2:02	1:42	CIRCLING	457 (500-1)	557 (600-1)	557 (600-1½)	697 (700-2¼)	

NDB RWY 31

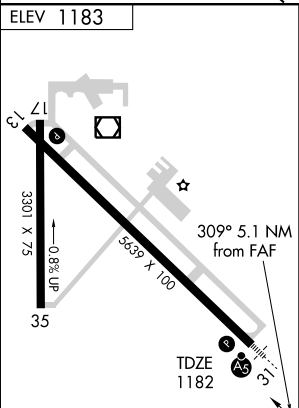
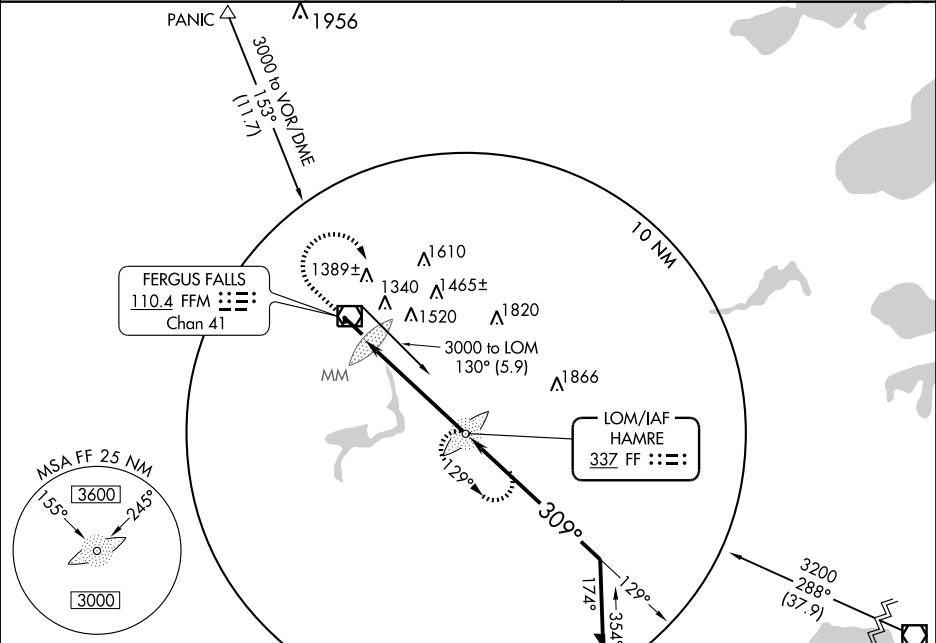
LOM FF	APP CRS	Rwy Idg	5639
337	309°	TDZE	1182
		Apt Elev	1183

FERGUS FALLS MUNI-EINAR MICKELSON FIELD (F'FM)

When local altimeter setting not received, use Wheaton altimeter setting and increase all MDA 120 feet, S-31 and Circling Cats C and D visibility ½ mile, Circling Cat B ¼ mile. For inoperative MALSR when using Wheaton altimeter setting, increase S-31 Cat B visibility ½ mile.

MALSR	MISSED APPROACH:
	Climb to 3000 then right turn direct FF LOM and hold.

AWOS-3	PRINCETON RADIO	UNICOM
110.4	122.35	122.8 (CTAF) 0

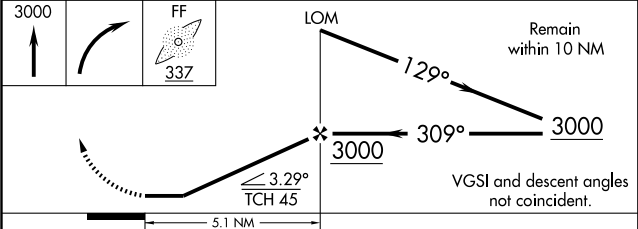


REIL Rwy 13 and 35

MIRL Rwy 13-31 and 17-35

FAF to MAP 5.1 NM

Knots	60	90	120	150	180
Min:Sec	5:06	3:24	2:33	2:02	1:42



CATEGORY	A	B	C	D
S-31	1880-¾ 698 (700-¾)		1880-1½ 698 (700-1½)	1880-2 698 (700-2)
CIRCLING	1880-1 697 (700-1)		1880-2 697 (700-2)	1880-2¼ 697 (700-2¼)

WAAS CH 42614 W31A	APP CRS 308°	Rwy Idg TDZE Apt Elev	5639 1182 1183
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RNAV (GPS) RWY 31

FERGUS FALLS MUNI-EINAR MICKELSON FIELD (F'FM)

⚠ Inoperative table does not apply to LNAV Cat D. Baro-VNAV NA when using Wheaton altimeter setting. DME/DME RNP-0.3 NA. When local altimeter setting not received, use Wheaton altimeter setting and increase all DA 102 feet and all MDA 120 feet, LNAV/VNAV all Cats and Circling Cats C and D visibility ½ mile and LNAV Cat C ¼ mile. For inoperative MALSR when using Wheaton altimeter setting, increase LPV all Cats visibility ½ mile.

MALSR



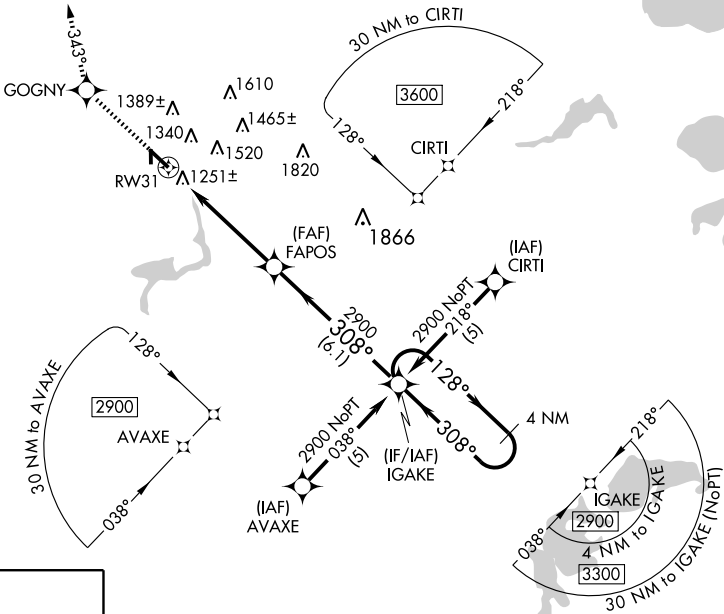
MISSED APPROACH:
Climb to 3000 direct GOGNY and via track 343° to PANIC and hold.

AWOS-3
110.4

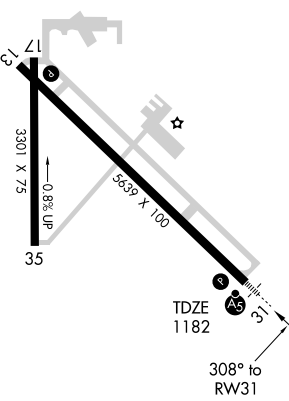
PRINCETON RADIO
122.35

UNICOM
122.8 (CTAF) 0

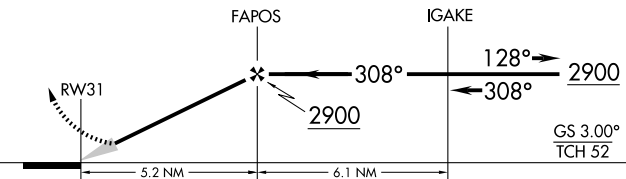
MISSED APCH FIX



ELEV 1183



3000	GOGNY	343° TRK	PANIC	VGSI and RNAV glidepath not coincident.	4 NM Holding Pattern
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CATEGORY	A	B	C	D
LPV DA	1382-½	200 (200-½)		
LNAV/VNAV DA	1545-¾	363 (400-¾)		
LNAV MDA	1520-½	338 (400-½)		1520-1 338 (400-1)
CIRCLING	1640-1 457 (500-1)	1740-1 557 (600-1)	1740-1½ 557 (600-1½)	1880-2¼ 697 (700-2¼)

REIL Rwy 13 and 35 0
MIRL Rwy 13-31 and 17-35 0

APP CRS	Rwy Idg	3301
354°	TDZE	1182
	Apt Elev	1183

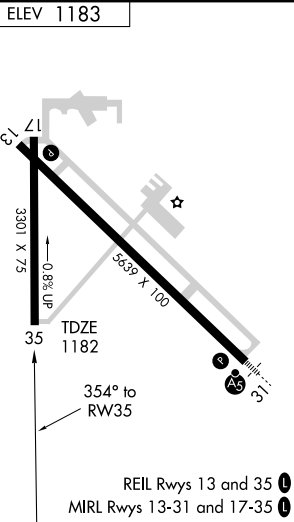
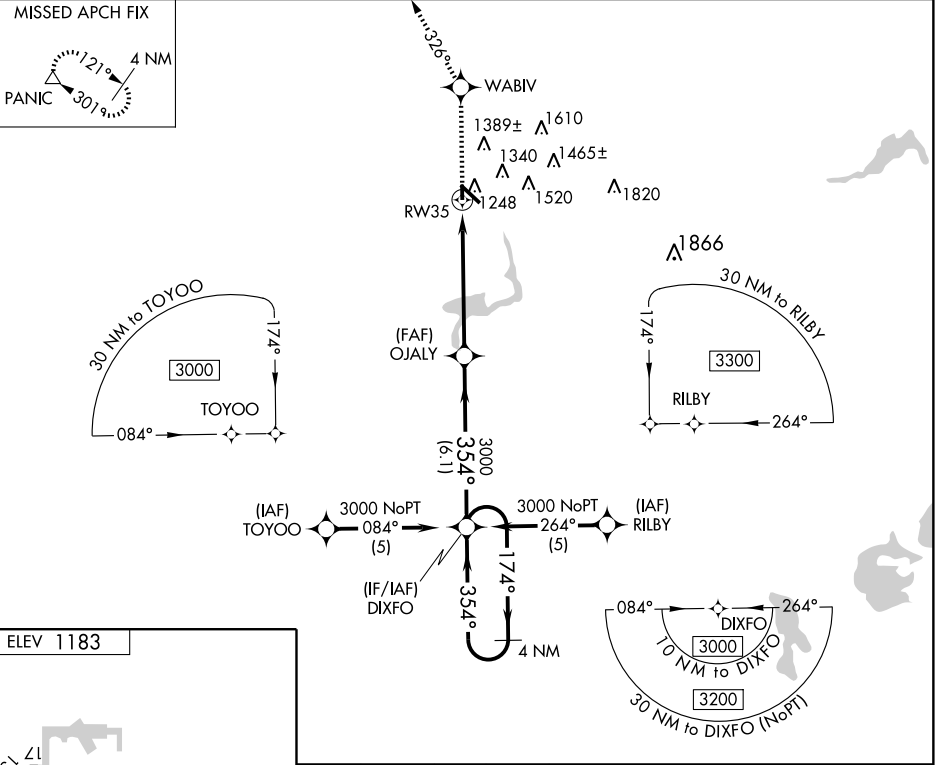
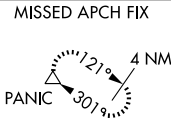
RNAV (GPS) RWY 35

FERGUS FALLS MUNI-EINAR MICKELSON FIELD (F'FM)

⚠ DME/DME RNP-0.3 NA. When local altimeter setting not received, use Wheaton altimeter setting and increase all MDA 120 feet and LNAV Cat C visibility ¼ mile, Circling Cat C ½ mile. VDP NA when using Wheaton altimeter setting.

MISSED APPROACH: Climb to 3000 direct WABIV and via track 326° to PANIC and hold.

AWOS-3 110.4	PRINCETON RADIO 122.35	UNICOM 122.8 (CTAF) 0
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3000	WABIV	326° TRK	PANIC	4 NM Holding Pattern
CATEGORY	A	B	C	D
LNAV MDA	1500-1 318 (400-1)			NA
CIRCLING	1640-1 457 (500-1)	1740-1 557 (600-1)	1740-1½ 557 (600-1½)	NA

NC-1. 17 DEC 2009 to 14 JAN 2010

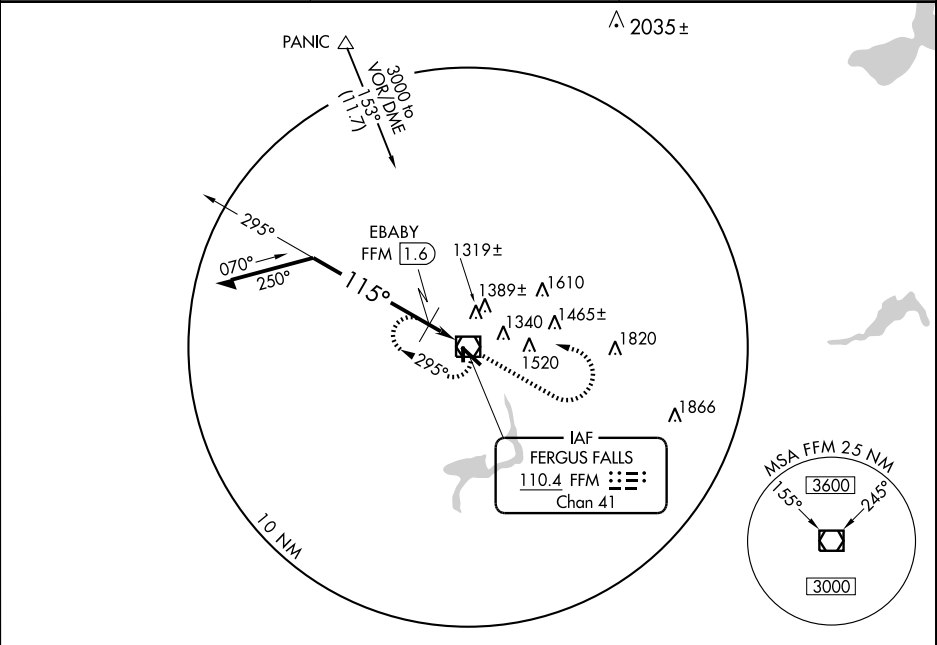
VOR RWY 13

VOR/DME FFM	APP CRS	Rwy Idg	5639
110.4	115°	TDZE	1182
Chan 41		Apt Elev	1183

FERGUS FALLS MUNI-EINAR MICKELSON FIELD (F'FM)

<p>⚠ Cat D straight-in minima NA when using Wheaton altimeter setting. When local altimeter setting not received, use Wheaton altimeter setting and increase all MDA 120 feet, and S-13 Cat C and D visibility ¼ mile, Circling Cat C and D visibility ½ mile, increase EBABY FIX minimums S-13 and Circling Cat C and D visibility ½ mile.</p> <p>⚠ NA</p>	<p>MISSED APPROACH: Climb to 3000 then left turn direct FFM VOR/DME and hold.</p>
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AWOS-3 110.4	PRINCETON RADIO 122.35	UNICOM 122.8 (CTAF) 1
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ELEV 1183

115° to VOR/DME

TDZE 1182

3301 X 75

0.88% UP

35

5639 X 100

REIL Rwy 13 and 35 **1**

MIRL Rwy 13-31 and 17-35 **1**

Remain within 10 NM

VOR/DME

3000

FFM 110.4

EBABY FFM 1.6

295°

2900

115°

*1640

2.75° TCH 50

VGSI and descent angles not coincident

1.6 NM

CATEGORY	A	B	C	D
S-13	1640-1	458 (500-1)	1640-1¼ 458 (500-1¼)	1640-1½ 458 (500-1½)
CIRCLING	1640-1 457 (500-1)	1740-1 557 (600-1)	1740-1½ 557 (600-1½)	1880-2¼ 697 (700-2¼)

EBABY FIX MINIMUMS

S-13	1580-1	398 (400-1)	1580-1¼ 398 (400-1¼)	
CIRCLING	1640-1 457 (500-1)	1740-1 557 (600-1)	1740-1½ 557 (600-1½)	1880-2¼ 697 (700-2¼)

VOR/DME FFM
110.4
Chgn **41**

APP CRS
0010

Rwy Idg	3301
TDZE	1182
Apt Elev	1183

VOR RWY 35
FERGUS FALLS MUNI-EINAR MICKELSON FIELD (FFM)

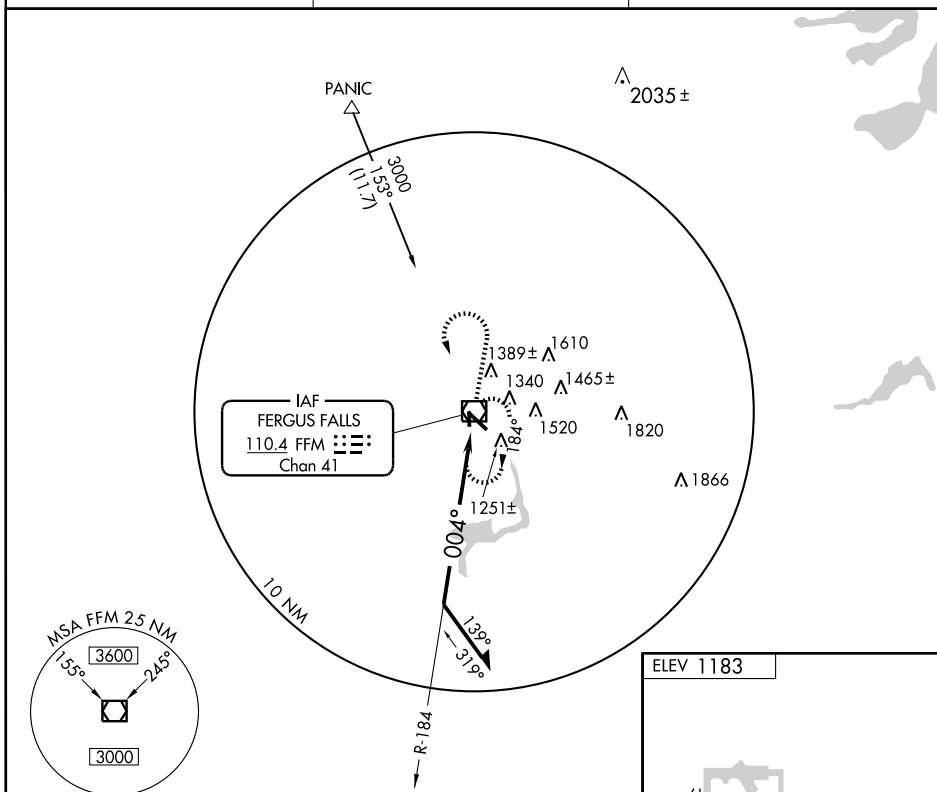
NA When local altimeter setting not received, use Wheaton altimeter setting and increase all MDA 120 feet, S-35 Cat C visibility ¼ mile and Circling Cat C visibility ½ mile

MISSED APPROACH: Climb to 3000 then left turn direct FFM VOR/DME and hold.

AWOS-3
110.4

PRINCETON RADIO
122.35

UNICOM
122.8 (CTAF) **L**



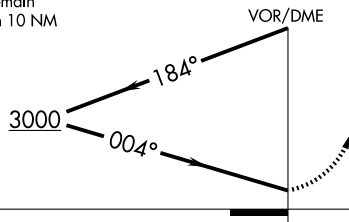
Remain
within 10 NM

VOR/DME

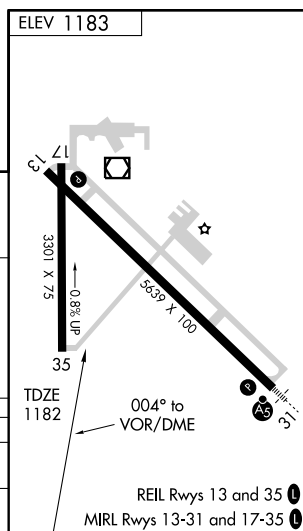
3000

FFM

 110.4





CATEGORY	A	B	C	D
S-35	1600-1	418 (500-1)	1600-1 $\frac{1}{4}$ 418 (500-1 $\frac{1}{4}$)	NA
CIRCLING	1640-1 457 (500-1)	1740-1 557 (600-1)	1740-1 $\frac{1}{2}$ 557 (600-1 $\frac{1}{2}$)	NA

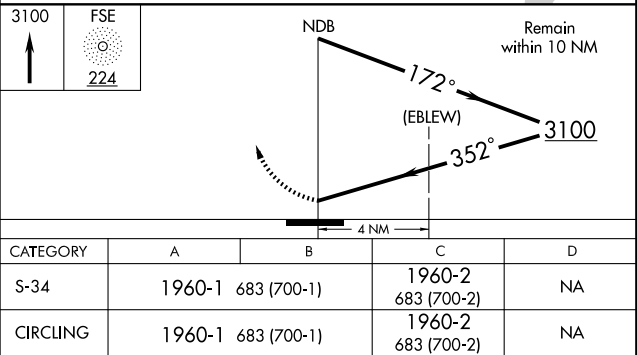
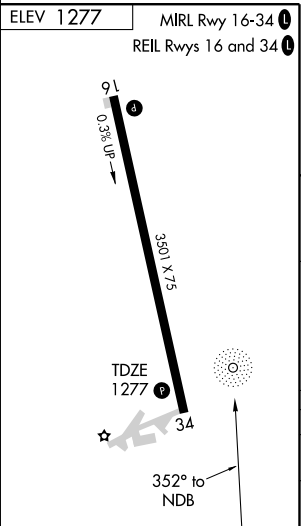
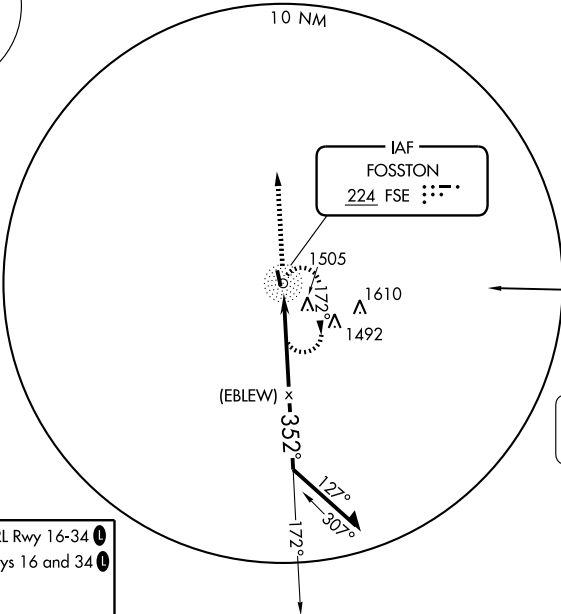
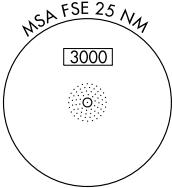


NDB FSE	APP CRS	Rwy Idg TDZE	3501
224	352°	Apt Elev	1277

NDB or GPS RWY 34

FOSSTON MUNI (FSE)

 NA		MISSED APPROACH: Climb to 3100 then direct FSE NDB and hold.	
AWOS-3 224	MINNEAPOLIS CENTER 134.75 251.1	GCO 121.725	CTAF 122.9 

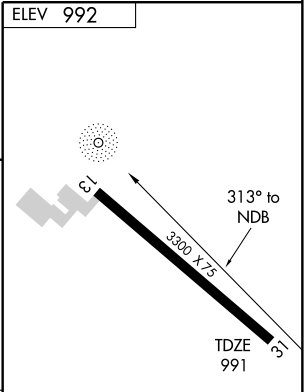
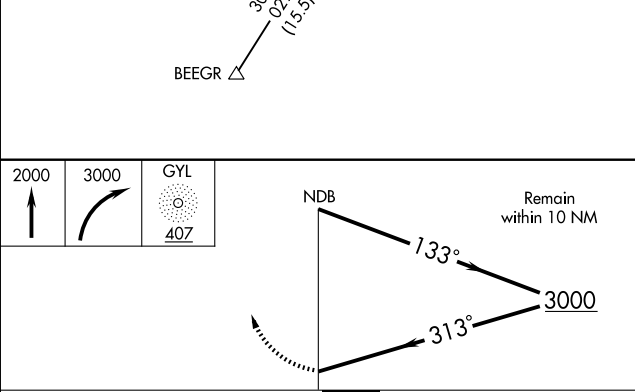
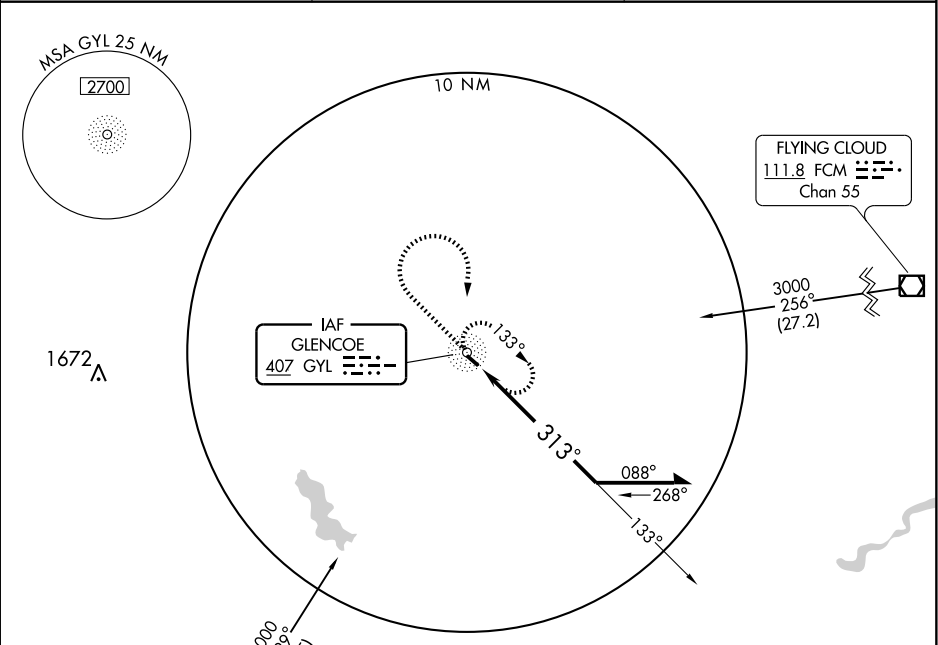


NDB GYL	APP CRS	Rwy Idg	3300
407	313°	TDZE	991
		Apt Elev	992

NDB RWY 31
 GLENCOE MUNI (GYL)

<div> <div></div> <div>NA</div> </div>	MISSED APPROACH: Climb to 2000 then climbing right turn to 3000 direct GYL NDB and hold.
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AWOS-3 407	MINNEAPOLIS APP CON 134.7 284.7	UNICOM 122.8 (CTAF) 0
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CATEGORY	A	B	C	D
S-31	1560-1	569 (600-1)	NA	
CIRCLING	1560-1	568 (600-1)	NA	

MRL Rwy 13-31 0

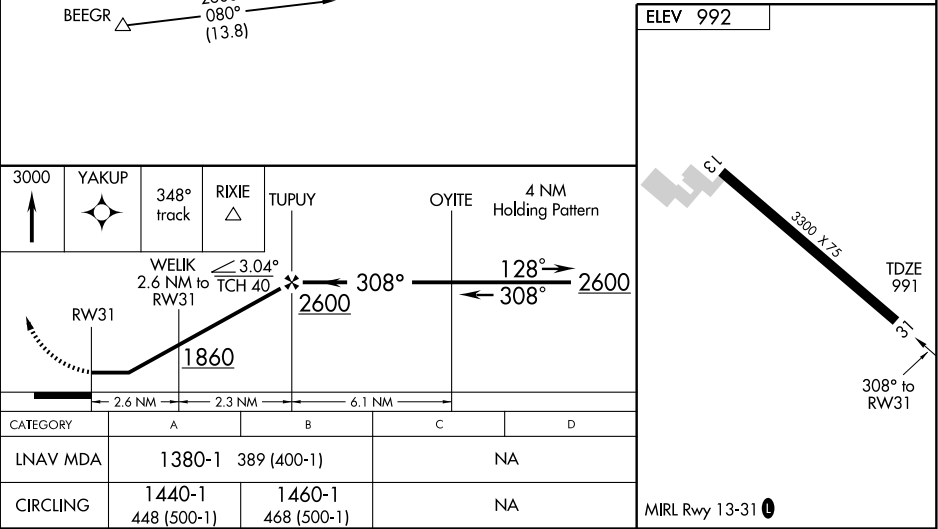
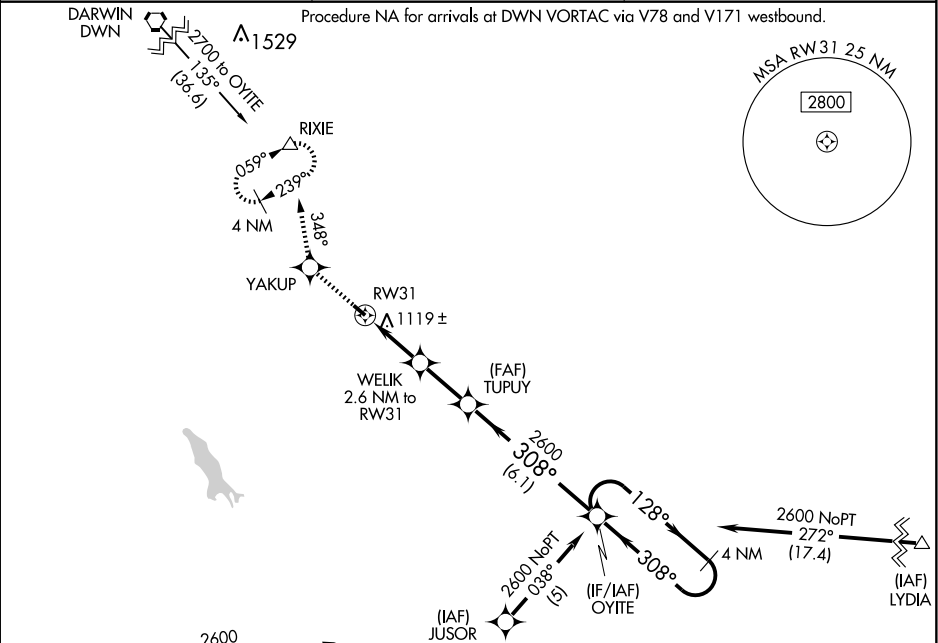
APP CRS	Rwy Idg	3300
308°	TDZE	991
	Apt Elev	992

RNAV (GPS) RWY 31

GLENCOE MUNI (GYL)

<p>▼ DME DME/RNP-0.3 NA. Visibility reduction by helicopters NA.</p> <p>▲ When local altimeter setting not received, use Hutchinson altimeter setting and increase all MDA 60 feet.</p>	<p>MISSED APPROACH: Climb to 3000 direct YAKUP and via 348° track to RIXIE and hold, continue climb-in-hold to 3000.</p>
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AWOS-3 407	MINNEAPOLIS APP CON 134.7 284.7	UNICOM 122.8 (CTAF) 1
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APP CRS	Rwy Idg	4500
338°	TDZE	1388
	Apt Elev	1393

GPS RWY 33
GLENWOOD MUNI (GHW)



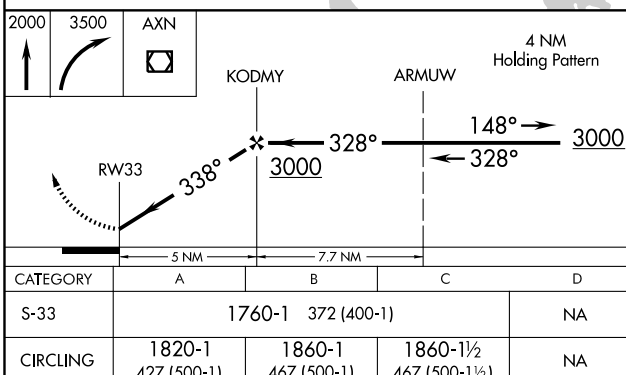
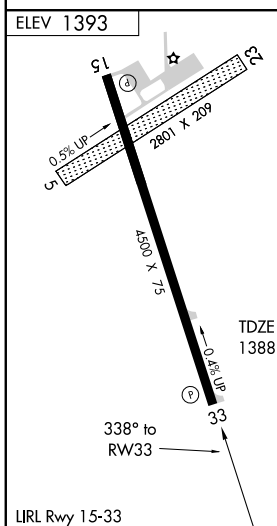
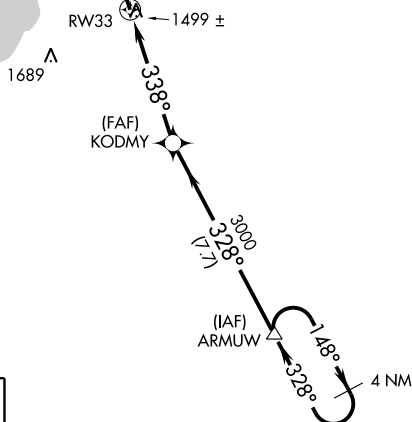
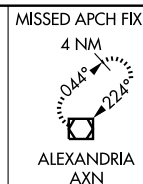
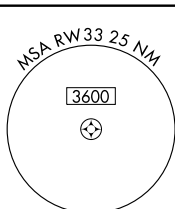
MISSED APPROACH: Climb to 2000, then climbing right turn to 3500 direct AXN VOR/DME and hold.

AWOS-3
346

MINNEAPOLIS CENTER
126.1 269.2

GCO
121,725

CTAF
122.9



VOR/DME AXN 112.8 Chan 75	APP CRS 003°	Rwy Idg 4500 TDZE 1388 Apt Elev 1393
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VOR RWY 33
GLENWOOD MUNI (GHW)

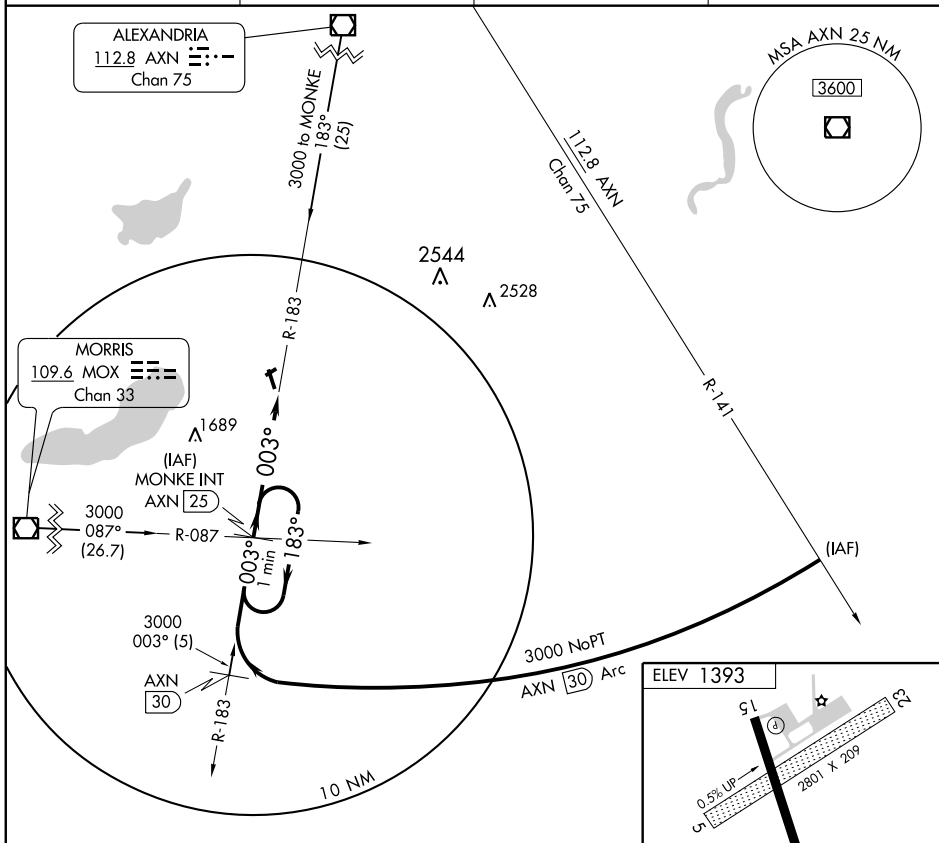
TANA

MISSED APPROACH: Climb to 2000, then climbing right turn to 3000 via AXN R-183 to MONKE Int/25 DME and hold.

AWOS-3
346

MINNEAPOLIS CENTER
126.1 269.2

GCO
121.725

CTAF
122.9

NC-1. 17 DEC 2009 to 14 JAN 2010

One Minute Holding Pattern

MONKE INT
AXN 25

2000

300

MONKE

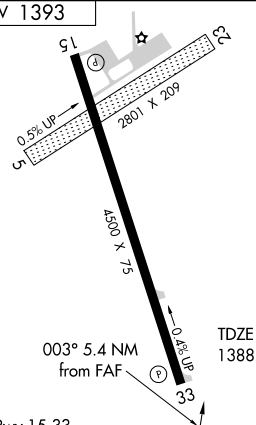
$$\frac{3000}{003^\circ} \rightarrow$$

— 002

5.4 NM —————

CATEGORY	A	B	C	D
S-33	1880-1	492 (500-1)	1880-1 $\frac{1}{4}$ 492 (500-1 $\frac{1}{4}$)	NA
CIRCLING	1880-1	487 (500-1)	1880-1 $\frac{1}{2}$ 487 (500-1 $\frac{1}{2}$)	NA

ELEV 1393



LIRL Rwy 15-33

FAF to MAP 5.4 NM

Knots	60	90	120	150	180
Min:Sec	5:24	3:36	2:42	2:10	1:48

NDB CKC
358

APP CRS
285°

Rwy Idg	4199
TDZE	1797
Apt Elev	1799

NDB RWY 27

GRAND MARAIS/COOK COUNTY (CKC)



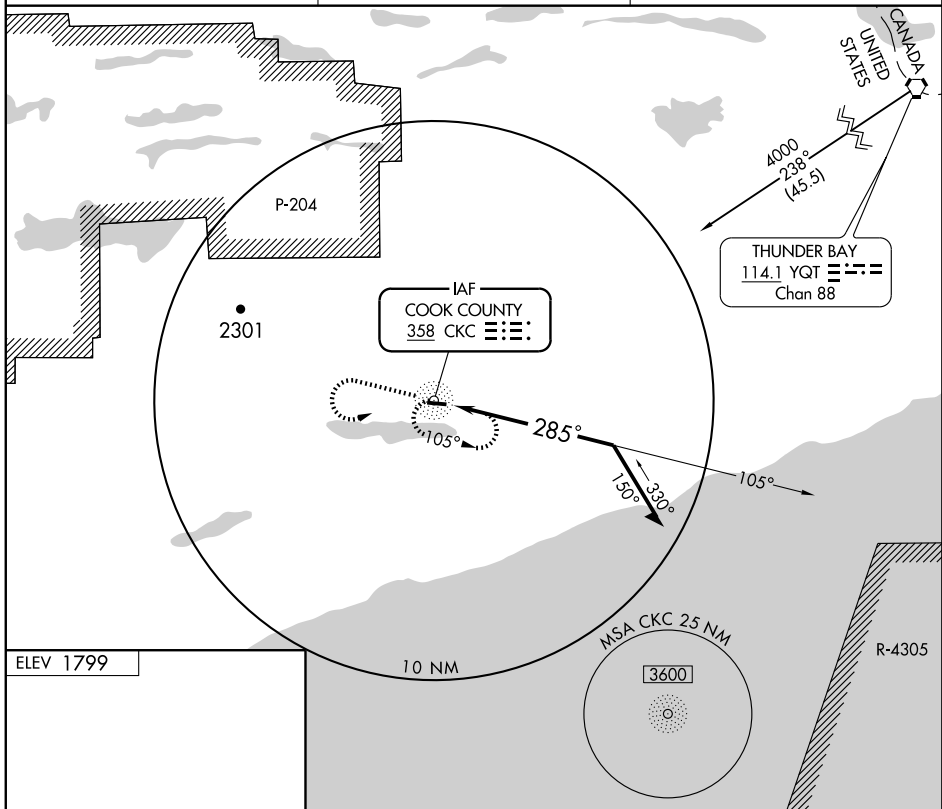
ANA

MISSED APPROACH: Climb to 3000, then climbing left turn to 3500 direct CKC NDB and hold.

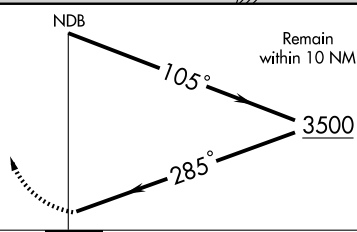
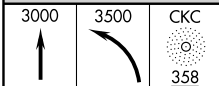
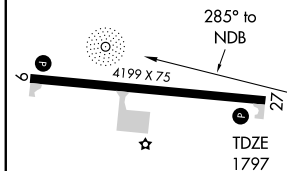
AWOS-3
119.925

PRINCETON RADIO
122.3

UNICOM
122.8 (CTAF) **L**



ELEV 1799



CATEGORY	A	B	C	D
S-27	2340-1	543 (600-1)	2340-1½ 543 (600-1½)	NA
CIRCLING	2340-1	541 (600-1)	2340-1½ 541 (600-1½)	NA

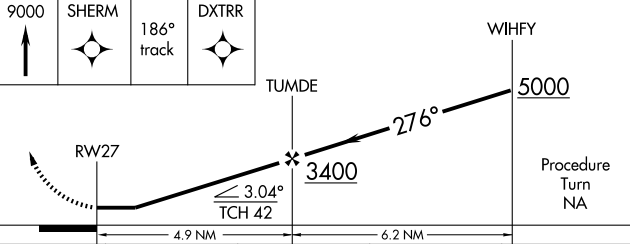
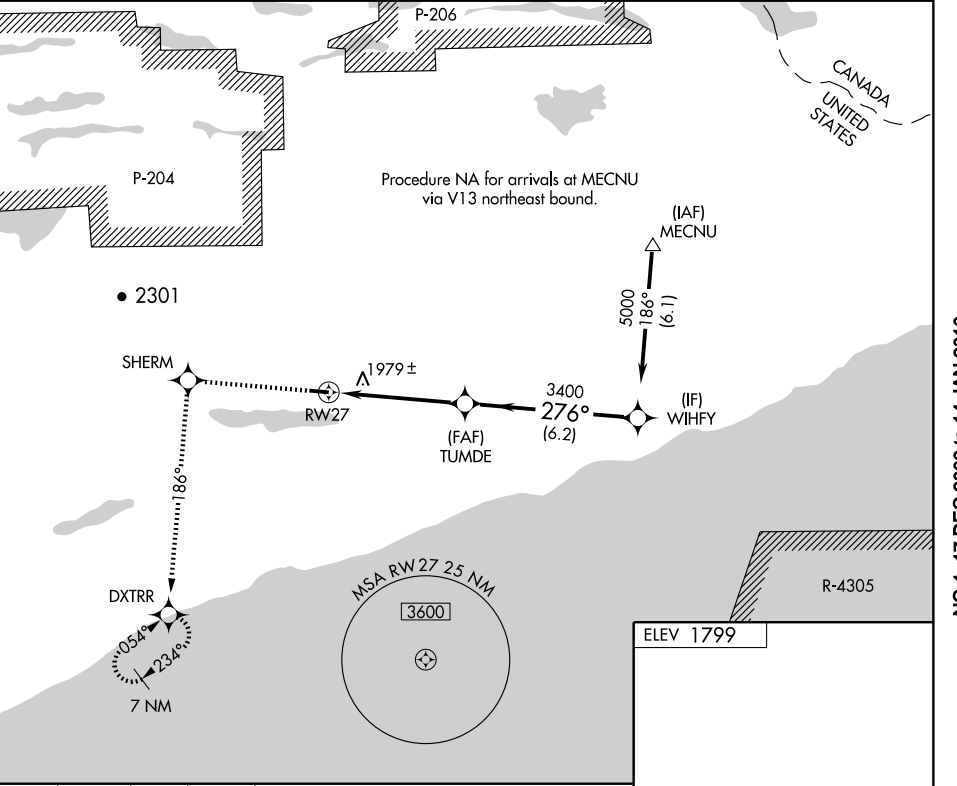
MIRL Rwy 9-27 **L**
REIL Rwy 9 and 27 **L**

APP CRS	Rwy Idg	4199
276°	TDZE	1797
	Apt Elev	1799

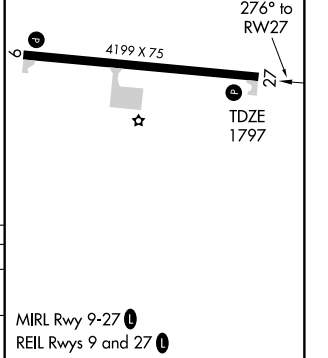
⚠ DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.
⚠ When local altimeter setting not received, use Ely altimeter setting and increase all MDA 200 feet, increase LNAV Cat C visibility ½ mile, circling Cat B visibility ¼ mile, and circling Cat C visibility ¾ mile.

MISSED APPROACH: Climb to 9000 direct SHERM and via 186° track to DXTRR and hold, continue climb-in-hold to 9000.

AWOS-3 119.925	PRINCETON RADIO 122.3	UNICOM 122.8 (CTAF) 0
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CATEGORY	A	B	C	D
LNAV MDA	2240-1	443 (500-1)	2240-1¼ 443 (500-1¼)	NA
CIRCLING	2340-1	541 (600-1)	2340-1½ 541 (600-1½)	NA



NC-1. 17 DEC 2009 to 14 JAN 2010

NA

Circling not authorized at night to Rwy 10-28 and 5-23.

MALSR

MISSED APPROACH: Climb to 3000, then right turn direct GALEX LOM and hold.

AWOS-3 118.425	MINNEAPOLIS CENTER 127.9 281.45	UNICOM 122.8 (CTAF) 0
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ADF REQUIRED

ELEV 1355 REIL Rwy 5, 16, 23
HIRL Rwy 16-34
MIRL Rwy 5-23

3000	GP 272	LOM 2796	164°	3000	344°	2900*	2900	GS 3.00° TCH 60
GP 4.3	4.3 NM	*LOC only						
CATEGORY	A	B	C	D				
S-ILS 34	1555-½ 200 (200-½)							
S-LOC 34	1760-½	405 (500-½)	1760-¾ 405 (500-¾)	1760-1 405 (500-1)				
CIRCLING	1860-1 505 (600-1)	1900-1 545 (600-1)	1900-1½ 545 (600-1½)	1920-2 565 (600-2)				

NC-1. 17 DEC 2009 to 14 JAN 2010

APP CRS	Rwy Idg	5332
164°	TDZE	1332
	Apt Elev	1355

RNAV (GPS) RWY 16

GRAND RAPIDS/ITASCA COUNTY-GORDON NEWSTROM FIELD (GPZ)

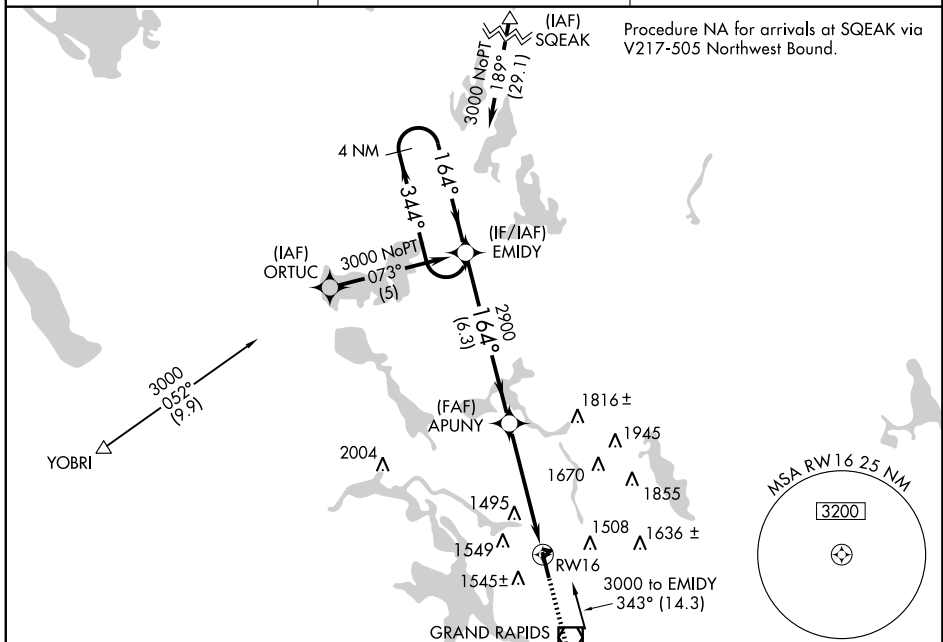
T Circling to Rwy 10-28 and 5-23 NA at night. DME/DME RNP-0.3 NA. Visibility reduction by
A helicopters NA. When local altimeter setting not received, use Hibbings altimeter setting and
 increase all MDA 80 feet and increase LNAV and Circling Cat. C visibility ¼ mile.

MISSED APPROACH:
Climb to 2900 direct
ADIER and hold.

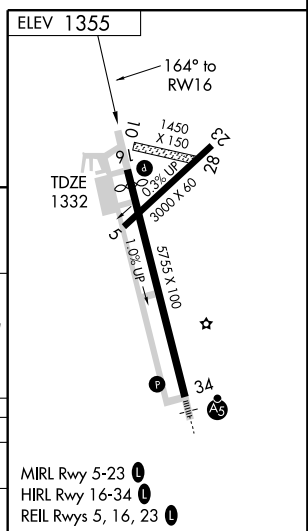
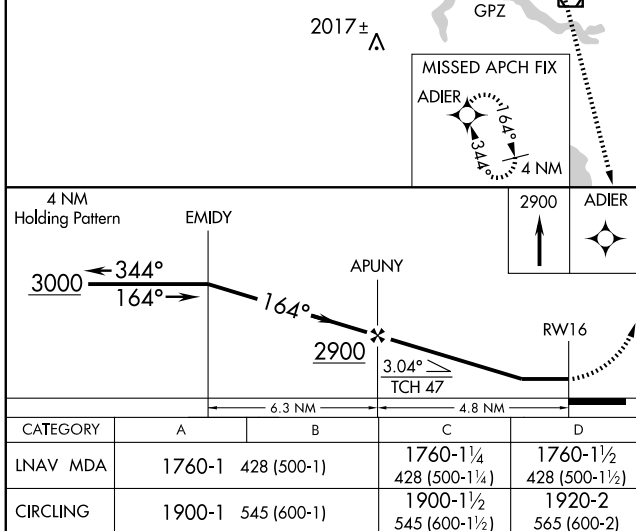
AWOS-3
118.425

MINNEAPOLIS CENTER
127.9 281.45

UNICOM
122.8 (CTAF) **L**



NC-1. 17 DEC 2009 to 14 JAN 2010



WAAS
CH **86412**
W34A

APP CRS
344°

Rwy Idg
TDZE
Apt Elev

5755
1355
1355

GRAND RAPIDS/

ITASCA COUNTY-GORDON NEWSTROM FIELD (GPZ)

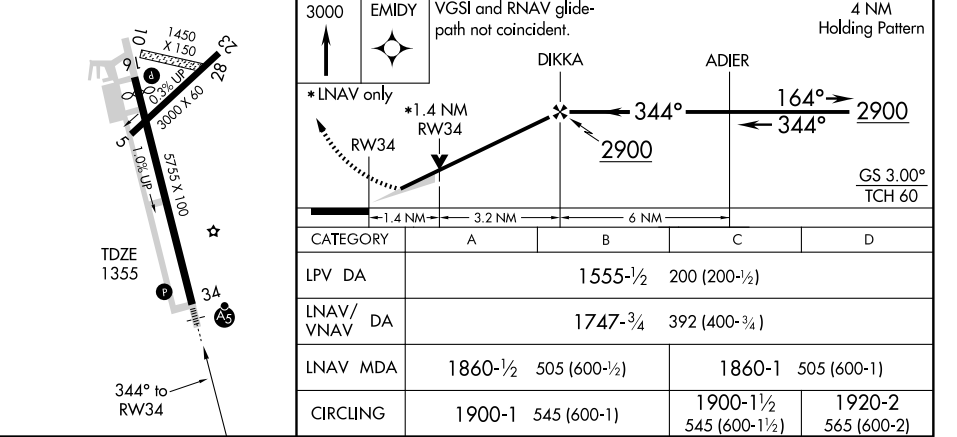
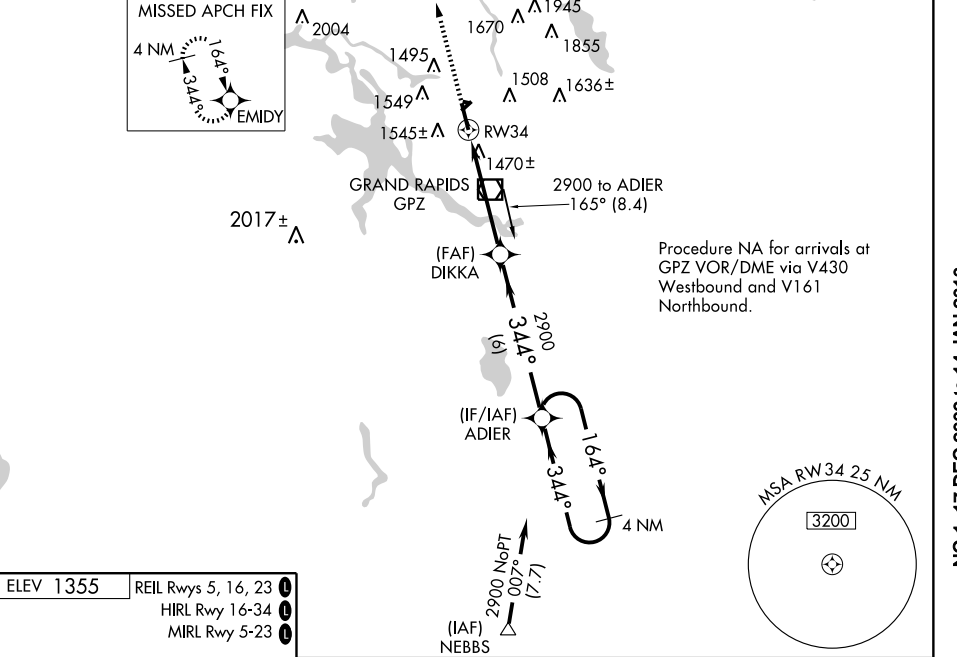
Circling to Rwy 10-28 and 5-23 NA at night. For inoperative MALSRR when using Khib altimeter setting, increase LPV all Cats. visibility to 1 mile. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). DME/DME RNP-0.3 NA. Baro-VNAV and VDP NA when using Hibbings altimeter setting. When local altimeter setting not received, use Hibbings altimeter setting and increase all DA 68 feet and all MDA 80 feet, increase LNAV/VNAV all Cats., LNAV Cat. D, and Circling Cat. C visibility ¼ mile.

MALSRR

A5

MISSED APPROACH:
Climb to 3000 direct
EMIDY and hold.

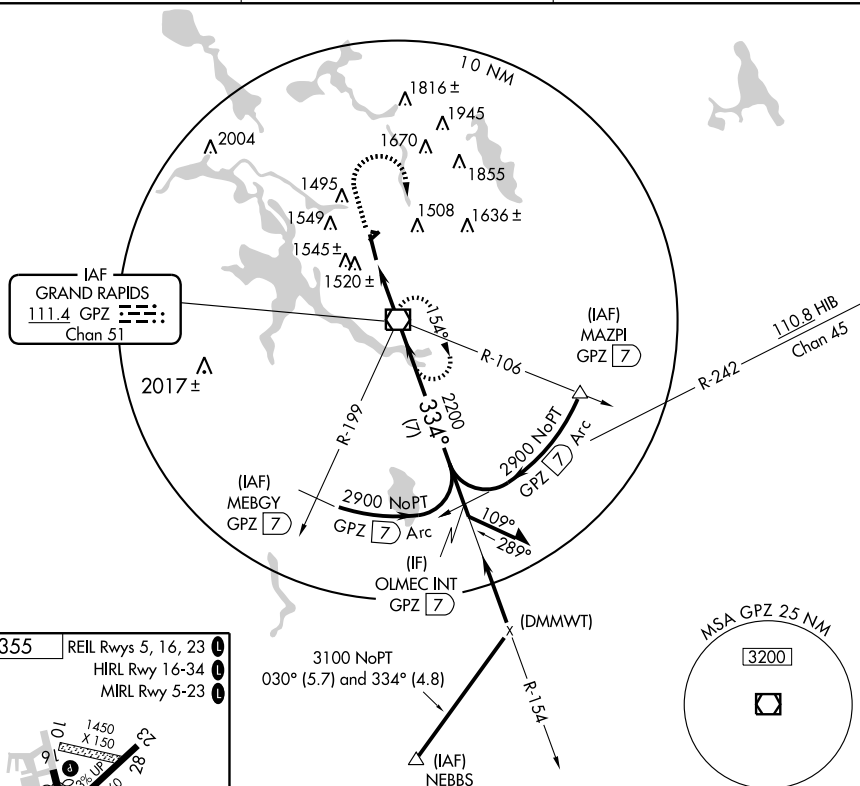
AWOS-3 118.425	MINNEAPOLIS CENTER 127.9 281.45	UNICOM 122.8 (CTAF) 0
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GRAND RAPIDS/
ITASCA COUNTY

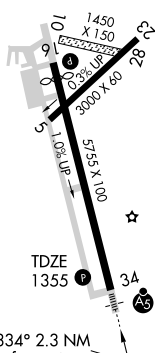


MISSED APPROACH: Climb to 3000 then right turn direct GPZ VOR/DME and hold.

UNICOM
122.8 (CTAF) **L**

NC-1. 17 DEC 2009 to 14 JAN 2010

ELEV 1355	REIL Rwy 5, 16, 23	L
	HIRL Rwy 16-34	L
	MIRL Rwy 5-23	L



FAF to MAP 2.3 NM

Knots	60	90	120	150	180
Min:Sec	2:18	1:32	1:09	0:55	0:46

VOR/DME

Remain within 10 NM

3000

GPZ 111.4

GPZ 2.3

GPZ 1

$\leq 3.29^\circ$

TCH 49

2200

334°

154°

1.3 NM

1 NM

CATEGORY	A	B	C	D
S-34	1800- $\frac{1}{2}$ 445 (500- $\frac{1}{2}$)		1800- $\frac{3}{4}$ 445 (500- $\frac{3}{4}$)	1800-1 445 (500-1)
CIRCLING	1900-1 545 (600-1)		1900-1 $\frac{1}{2}$ 545 (600-1 $\frac{1}{2}$)	1920-2 565 (600-2)

GPS RWY 33

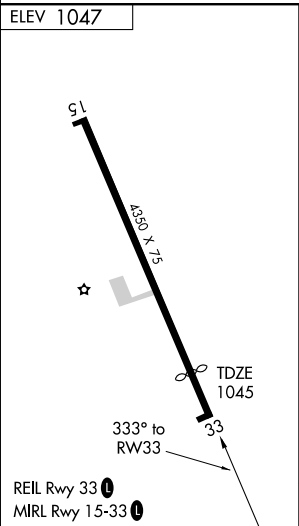
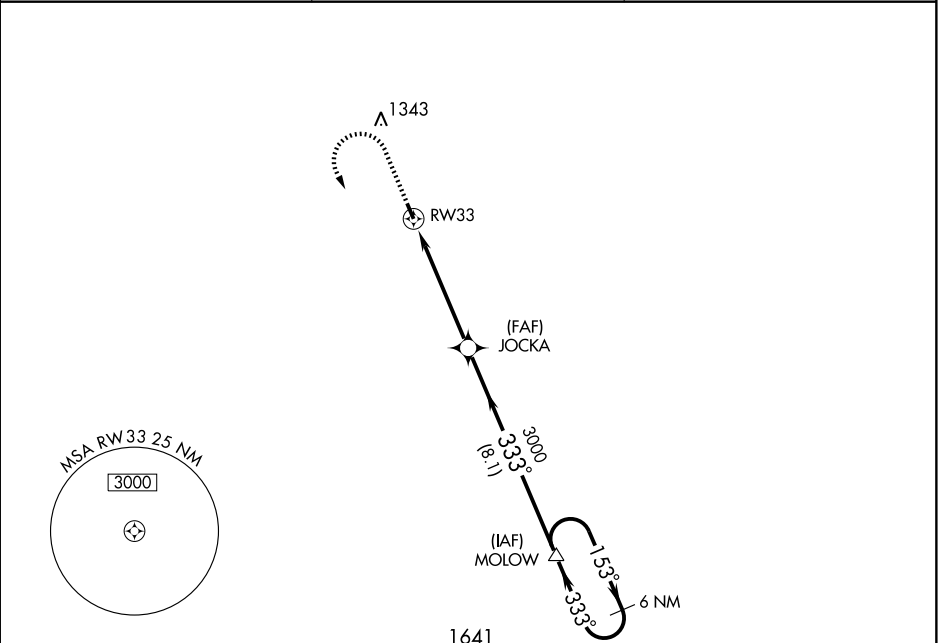
GRANITE FALLS MUNI/LENZEN-ROE MEMORIAL FIELD (GDB)

▲ NA

When local altimeter setting not received, use Montevideo altimeter setting.

MISSED APPROACH: Climb to 3000 then climbing left turn to 3800 direct MOLOW WP and hold.

AWOS-3 120.1	MINNEAPOLIS CENTER 127.1 290.2	UNICOM 122.8 (CTAF) 0
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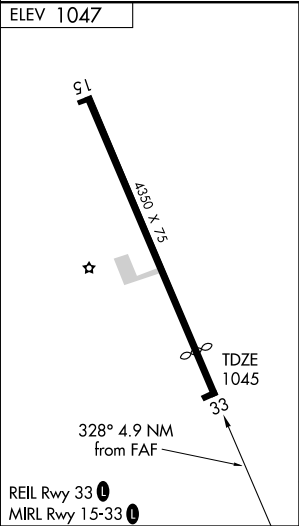
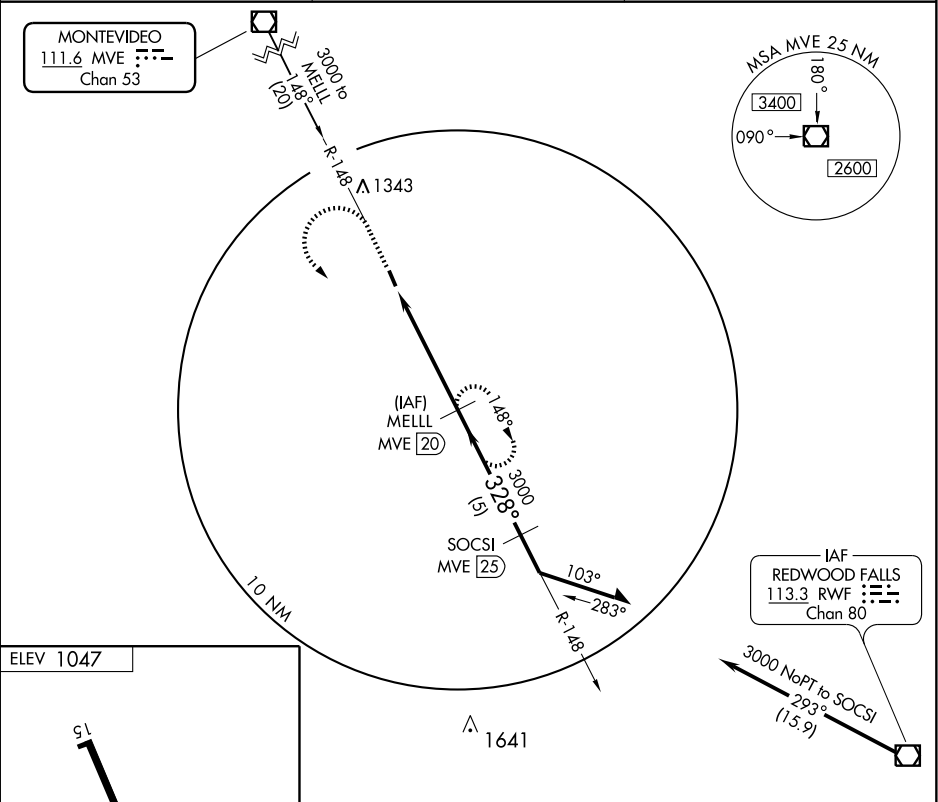
	3000	3800	MOLOW △		MOLOW	6 NM Holding Pattern
			JOCKA			
			RW33			
				3000		
				5 NM	8.1 NM	
CATEGORY	A	B	C	D		
S-33	1480-1	435 (500-1)	1480-1¼ 435 (500-1¼)	1480-1½ 435 (500-1½)		
CIRCLING	1520-1	473 (500-1)	1520-1½ 473 (500-1½)	1600-2 553 (600-2)		

VOR/DME MVE	APP CRS	Rwy Idg	3700
111.6	328°	TDZE	1045
Chan 53		Apt Elev	1047

VOR/DME RWY 33
GRANITE FALLS MUNI/LENZEN-ROE MEMORIAL FIELD (GDB)

▲ NA	When local altimeter setting not received, use Montevideo altimeter setting.	MISSED APPROACH: Climb to 3000, then left turn via R-148 to MELL/MVE 20 DME and hold.
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AWOS-3 120.1	MINNEAPOLIS CENTER 127.1 290.2	UNICOM 122.8 (CTAF) 0
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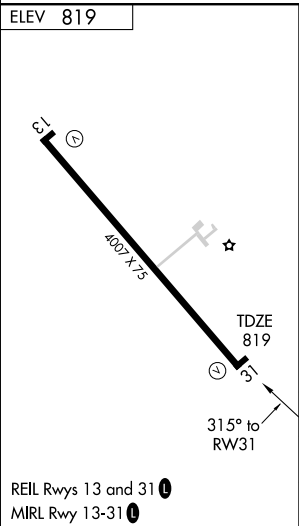
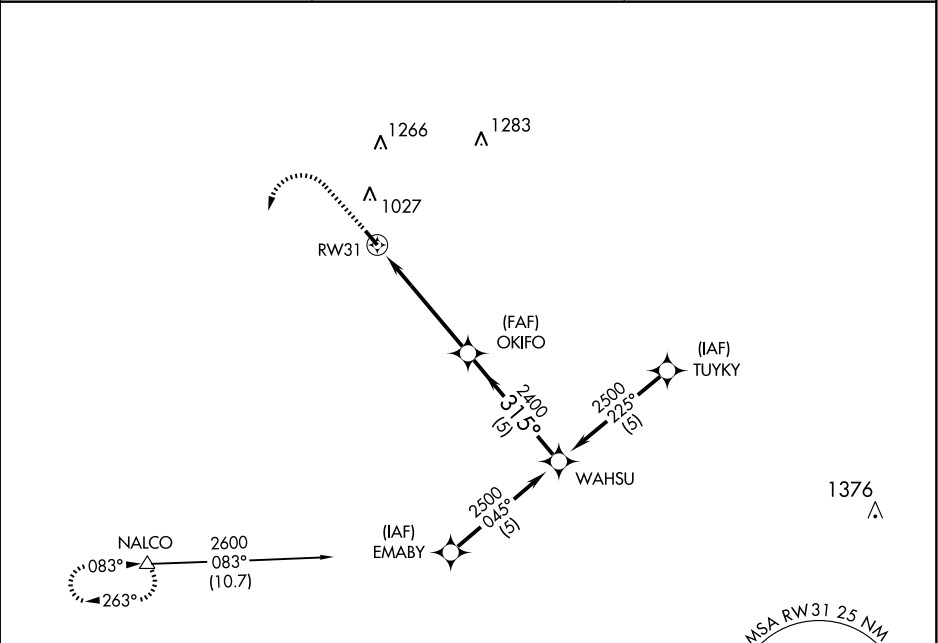
3000	MVE R-148	MELL MVE 20	MELL MVE 20	Remain within 10 NM
	MVE 15.1		3000	
	4.9 NM			
CATEGORY	A	B	C	D
S-33	1480-1	435 (500-1)	1480-1¼ 435 (500-1¼)	1480-1½ 435 (500-1½)
CIRCLING	1520-1	473 (500-1)	1520-1½ 473 (500-1½)	1600-2 553 (600-2)

GPS RWY 31
HALLOCK MUNI (HCO)

APP CRS	Rwy Idg	4007
315°	TDZE	819
	Apt Elev	819

▲ NA	MISSED APPROACH: Climb to 2000 then climbing left turn to 2600 direct NALCO WP and hold.
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AWOS-3 126.475	MINNEAPOLIS CENTER 132.15 269.6	UNICOM 122.8 (CTAF) 0
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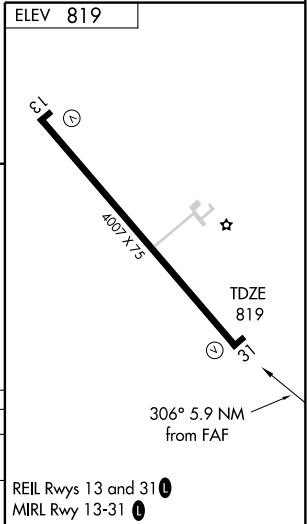
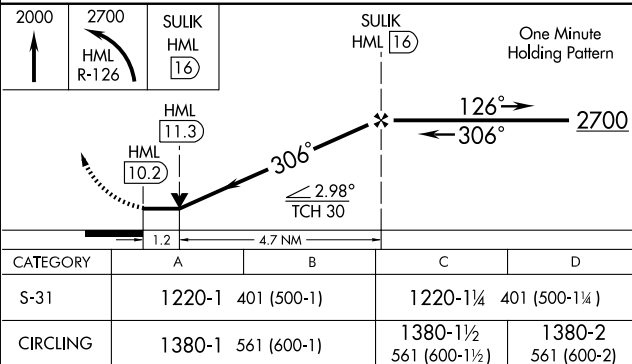
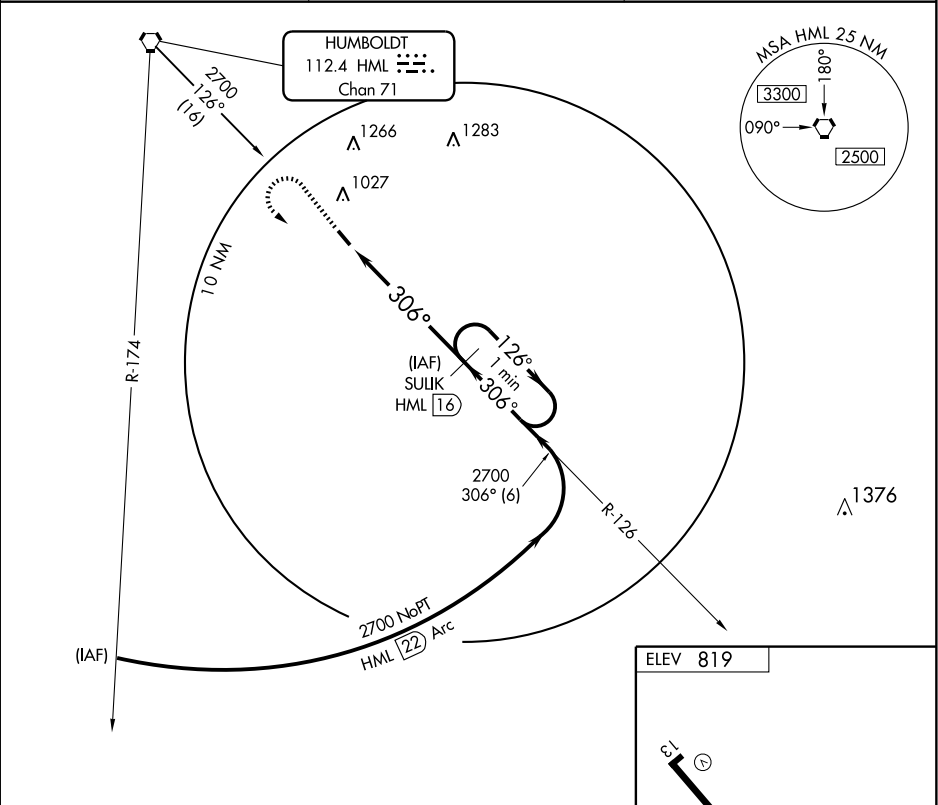
	2000	2600	NALCO △	WAHSU	
				OKIFO	
				1.2 NM to RW31	
				2.92° TCH 30	
				1.2	3.8 NM
					5 NM
CATEGORY	A	B	C	D	
S-31	1220-1	401 (500-1)	1220-1¼	401 (500-1¼)	
CIRCLING	1380-1	561 (600-1)	1380-1½	1380-2	
			561 (600-1½)	561 (600-2)	

VORTAC HML	APP CRS	Rwy Idg	4007
112.4	306°	TDZE	819
Chan 71		Apt Elev	819

VOR/DME RWY 31
HALLOCK MUNI (HCO)

NA	MISSED APPROACH: Climb to 2000 then climbing left turn to 2700 via HML R-126 to SULIK and hold.
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AWOS-3 126.475	MINNEAPOLIS CENTER 132.15 269.6	UNICOM 122.8 (CTAF)
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▼

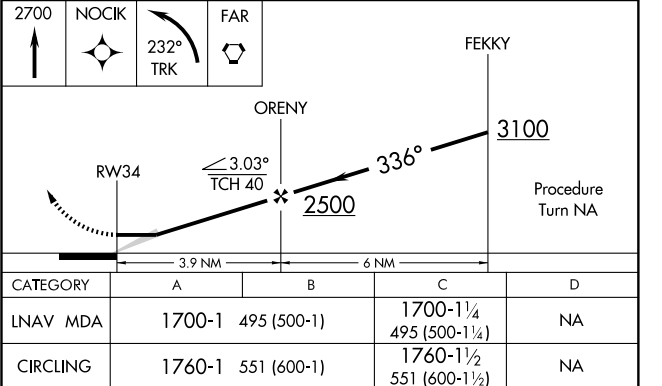
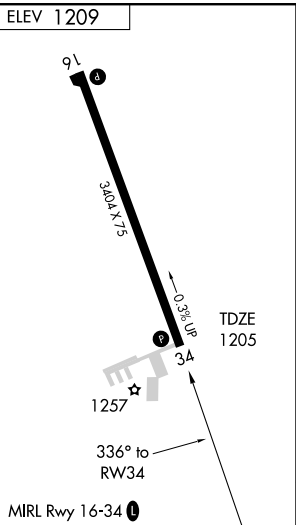
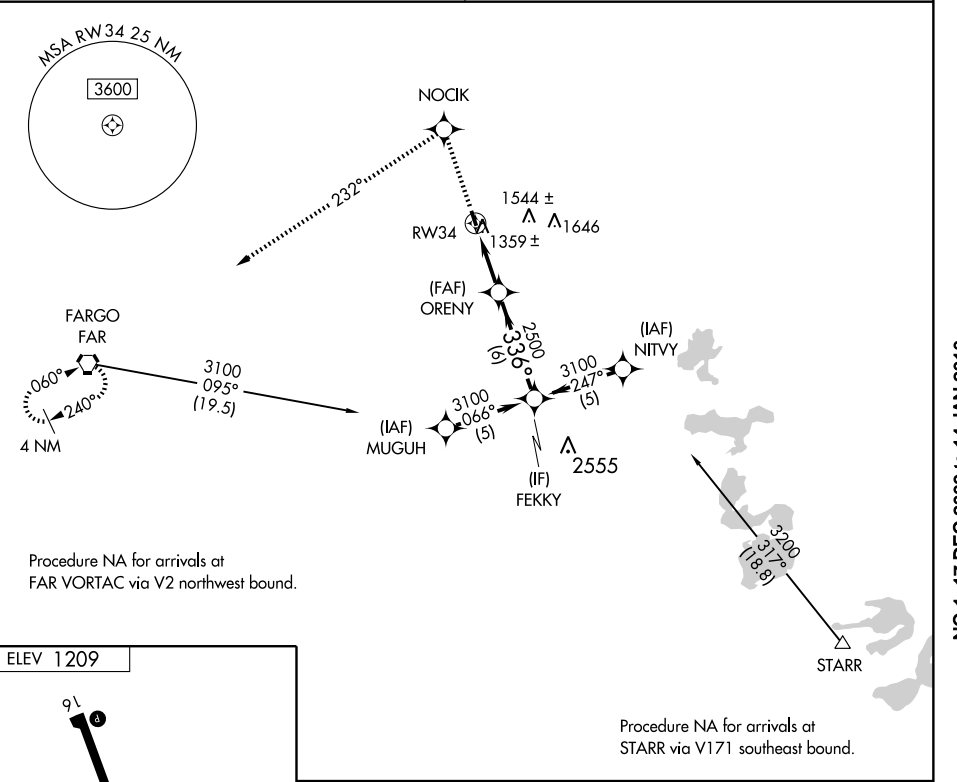
▲ NA

Use Fargo, ND altimeter setting.
DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 2700 direct NOCIK and left turn via 232° track to FAR VORTAC and hold.

FARGO APP CON ★
120.4 377.15

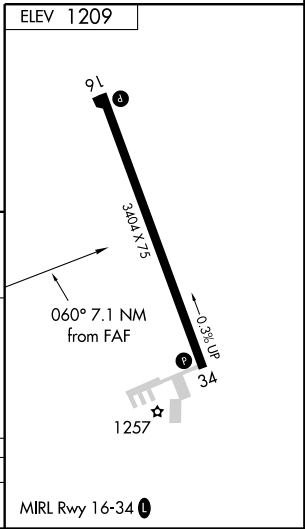
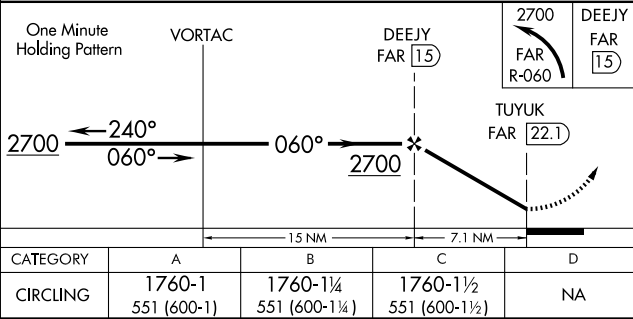
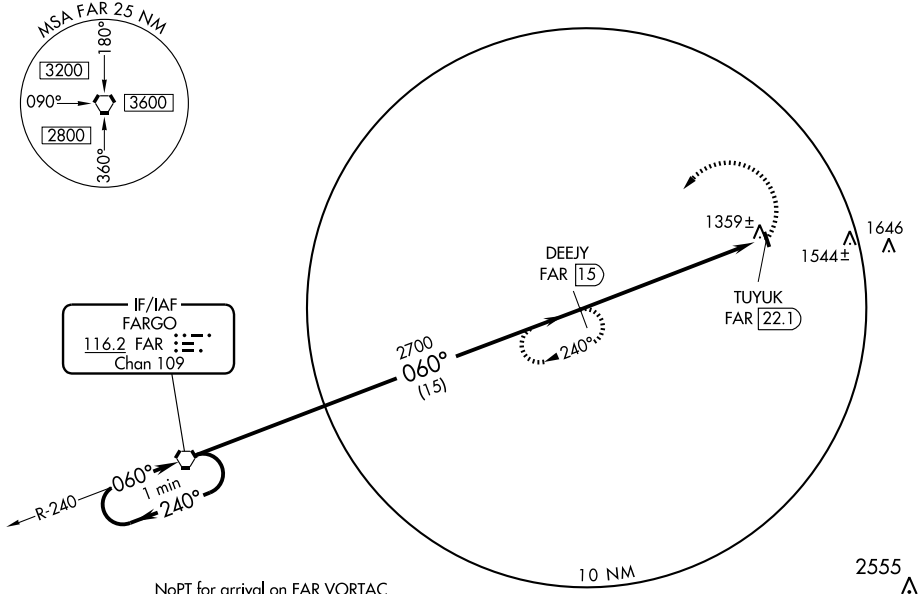
UNICOM
122.8 (CTAF) 0



NC-1: 17 DEC 2009 to 14 JAN 2010

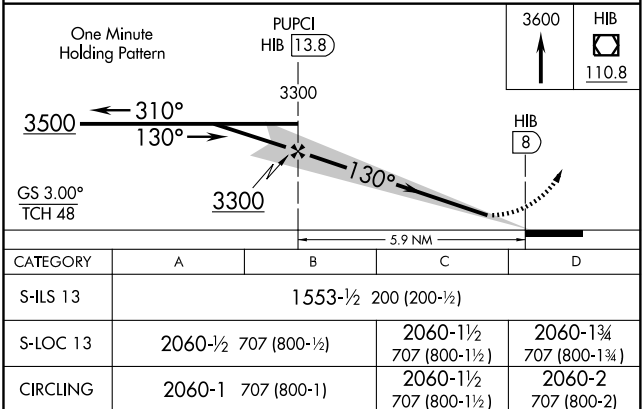
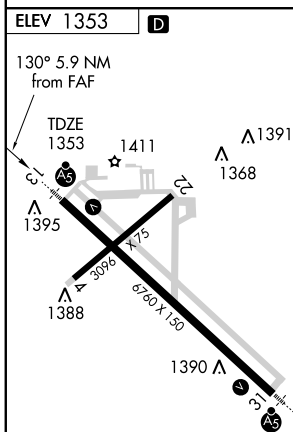
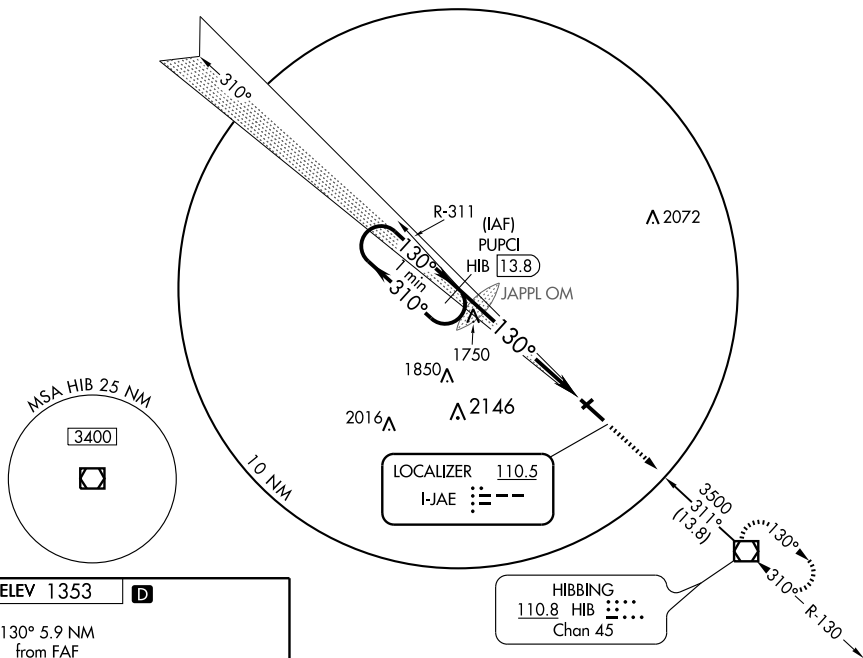
VORTAC FAR	APP CRS	Rwy Idg	N/A
116.2	060°	TDZE	N/A
Chan 109		Apt Elev	1209

<div><div>▼</div><div>▲ NA</div></div> <div>Use Fargo, ND altimeter setting.</div>	MISSED APPROACH: Climbing left turn to 2700 via FAR R-060 to DEEJY/15 DME and hold.
FARGO APP CON ★ 120.4 377.15	UNICOM 122.8 (CTAF) 1



ASOS 126.425	DULUTH APP CON* 125.45 255.9	CLNC DEL 127.4	UNICOM 123.0 (CTAF) L
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DME REQUIRED

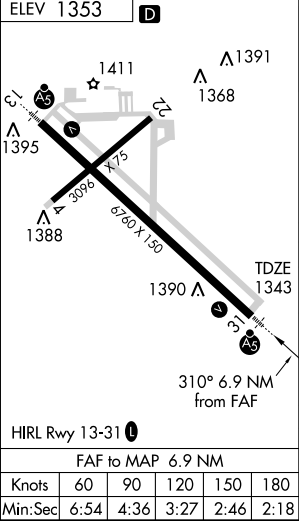
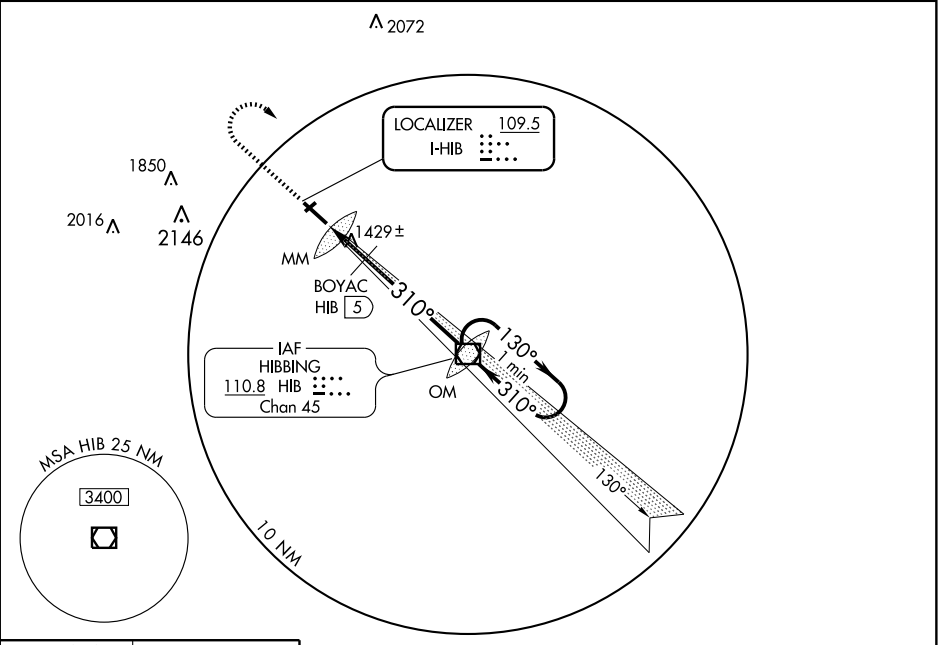


LOC I-HIB	APP CRS	Rwy Idg	6760
109.5	310°	TDZE	1343
		Apt Elev	1353

ILS or LOC RWY 31
HIBBING/ CHISHOLM-HIBBING (HIB)

<div>▼ For inoperative MALS, increase BOYAC FIX MINIMUMS S-LOC 31 Category D visibility to 1. #DME from HIB VOR/DME.</div>	<div>MALSRA5</div>	<div>MISSED APPROACH: Climb to 2500 then climbing right turn to 3600 direct HIB VOR/DME and hold.</div>
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ASOS 126.425	DULUTH APP CON* 125.45 255.9	CLNC DEL 127.4	UNICOM 123.0 (CTAF) 0
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<div>ELEV 1353 D</div>	<div>2500 3600 HIB 110.8</div>	<div>BOYAC HIB 5</div>	<div>VOR/DME OM 3558</div>	<div>One Minute Holding Pattern</div>
<div>1395 1391 1368 1388 1390 1343</div>	<div>1411</div>	<div>1429±</div>	<div>1740*</div>	<div>130° 3600 310° 3600 GS 2.90° TCH 60</div>
<div>310° 6.9 NM from FAF</div>	<div>0.5 1.4 NM 5 NM</div>	<div>MM</div>	<div>* LOC only</div>	
CATEGORY	A	B	C	D
S-ILS 31	1543-½ 200 (200-½)			
S-LOC 31	1740-½ 397 (400-½)			1740-¾ 397 (400-¾)
CIRCLING	1820-1 467 (500-1)	1840-1 487 (500-1)	1840-1½ 487 (500-1½)	1920-2 567 (600-2)
# BOYAC FIX MINIMUMS				
S-LOC 31	1680-½ 337 (400-½)			1680-¾ 337 (400-¾)
CIRCLING	1820-1 467 (500-1)	1840-1 487 (500-1)	1840-1½ 487 (500-1½)	1920-2 567 (600-2)

APP CRS 047°	Rwy Ldg TDZE Apt Elev	3096 1350 1353
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RNAV (GPS) RWY 4

HIBBING/CHISHOLM-HIBBING (HIB)

Procedure not authorized at night.
GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.

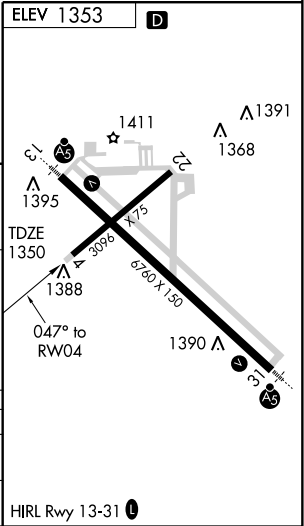
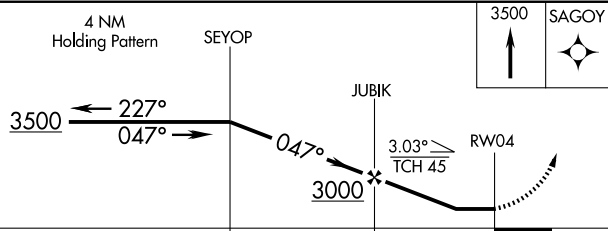
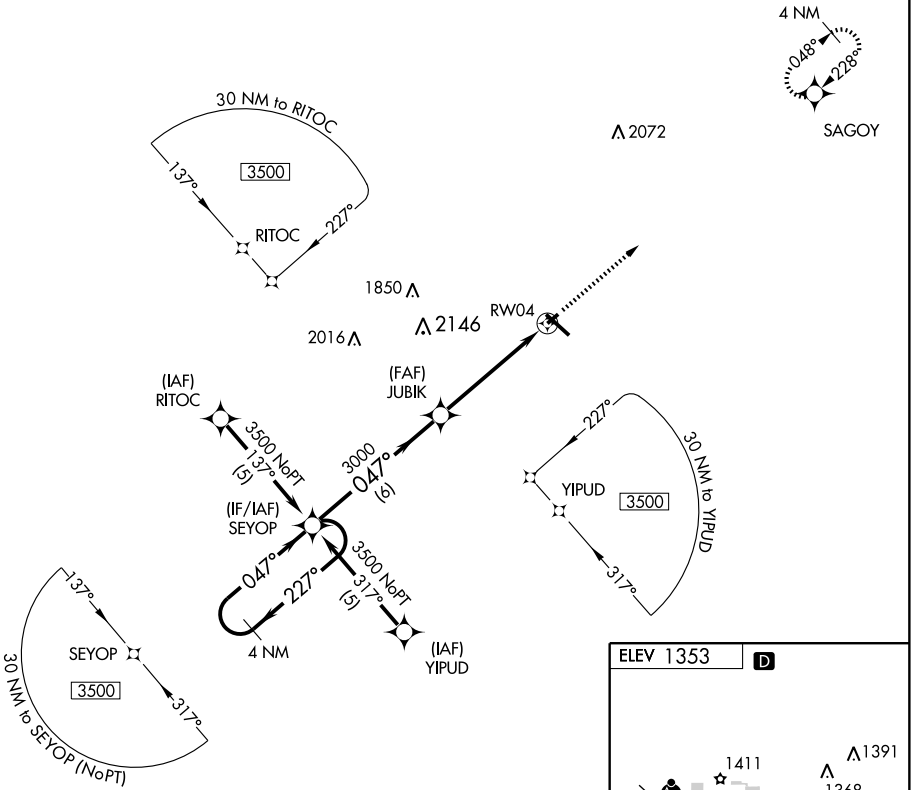
MISSED APPROACH: Climb to 3500 direct SAGOY WP and hold.

ASOS
126.425

DULUTH APP CON*
125.45 255.9

CLNC DEL
127.4

UNICOM
123.0 (CTAF)



CATEGORY	A	B	C	D
LNNAV MDA	1780-1	430 (500-1)	NA	NA
CIRCLING	1820-1 467 (500-1)	1840-1 487 (500-1)	NA	NA

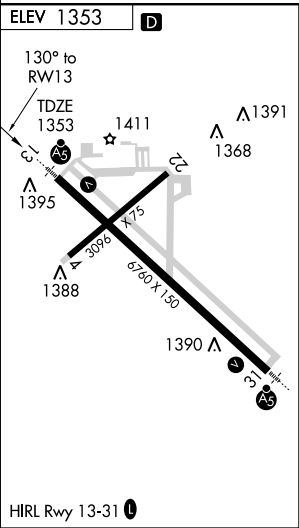
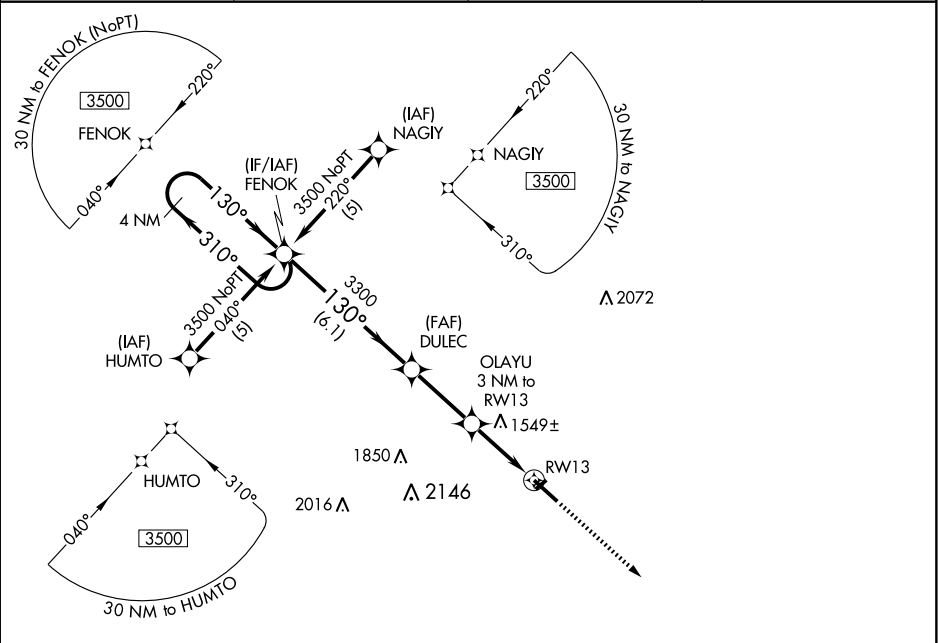
APP CRS 130°	Rwy Idg 6760 TDZE 1353 Apt Elev 1353
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RNAV (GPS) RWY 13

HIBBING/CHISHOLM-HIBBING (HIB)

NA Circling not authorized at night to Rwy 4-22. GPS or RNP-0.3 required. DME/DME RNP-0.3 NA. For inoperative MALSR, increase LNAV MDA Cat. A and B to 1 mile.	MALSR A5	MISSED APPROACH: Climb to 3500 direct CEKSA WP and hold.
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ASOS 126.425	DULUTH APP CON* 125.45 255.9	CLNC DEL 127.4	UNICOM 123.0 (CTAF) U
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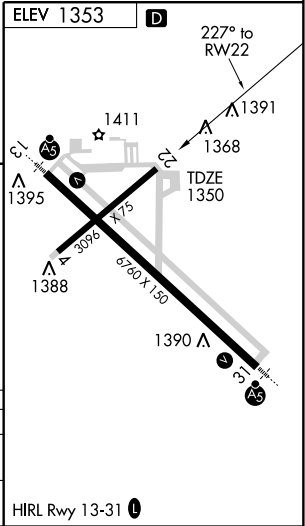
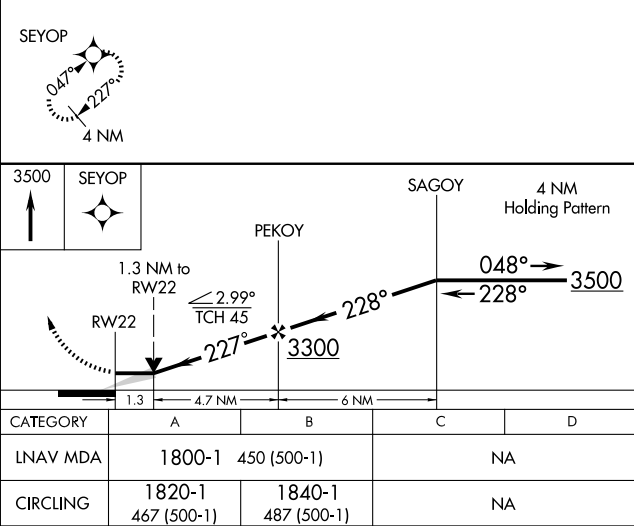
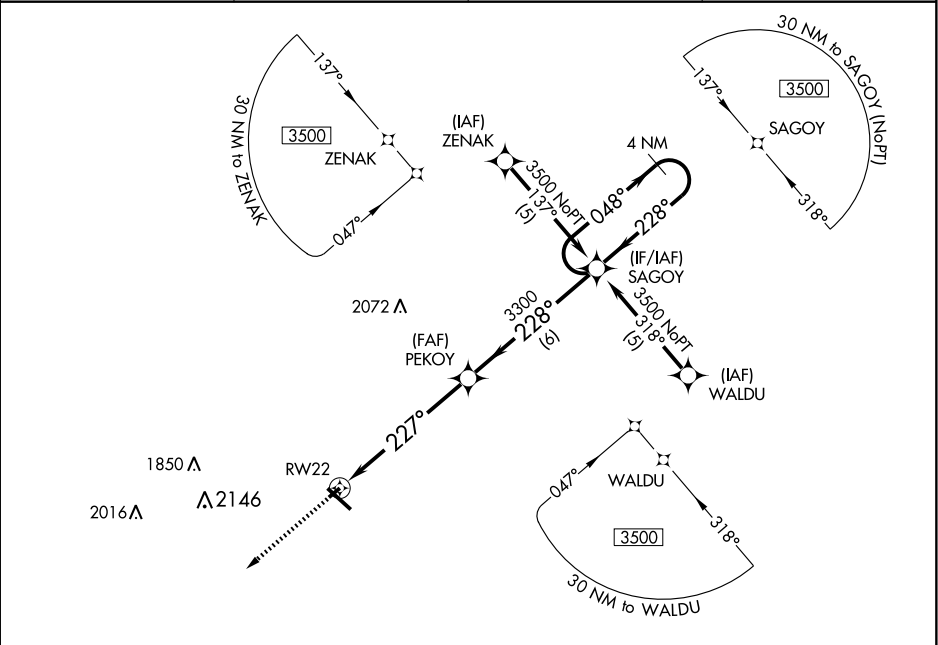


4 NM Holding Pattern FENOK				3500	CEKSA
DULEC				OLAYU 3 NM to RW13	
3500 ← 310° / 130° → 130°				3300	1.3 NM to RW13
3.06° TCH 45				2340	RW13
6.1 NM				2.9 NM	1.7 NM
CATEGORY	A	B	C	D	
LNAV MDA	1800-3/4 447 (500-3/4)			1800-1 447 (500-1)	
CIRCLING	1820-1 467 (500-1)	1840-1 487 (500-1)	1840-1 1/2 487 (500-1 1/2)	1920-2 567 (600-2)	

APP CRS 227°	Rwy Idg TDZE Apt Elev	3096 1350 1353
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RNAV (GPS) RWY 22
HIBBING/CHISHOLM-HIBBING (HIB)

Procedure not authorized at night. GPS or RNP- 0.3 required. DME/DME RNP- 0.3 NA.		MISSED APPROACH: Climb to 3500 direct SEYOP WP and hold.	
ASOS 126.425	DULUTH APP CON* 125.45 255.9	CLNC DEL 127.4	UNICOM 123.0 (CTAF) L



APP CRS
310°

Rwy Idg	6760
TDZE	1343
Apt Elev	1353

RNAV (GPS) RWY 31

HIBBING/CHISHOLM-HIBBING (HIB)



Circling not authorized at night to Rwy 4-22.



Baro-VNAV NA below -17°C (2°F).

GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.

For inoperative MALSR, increase LNAV Cat. A/B/C visibility to 1 mile.

Inoperative table does not apply to LNAV Cat. D.

MALSR



MISSED APPROACH: Climb to 3500
direct FENOK WP and hold.

ASOS

126.425

DULUTH APP CON ★

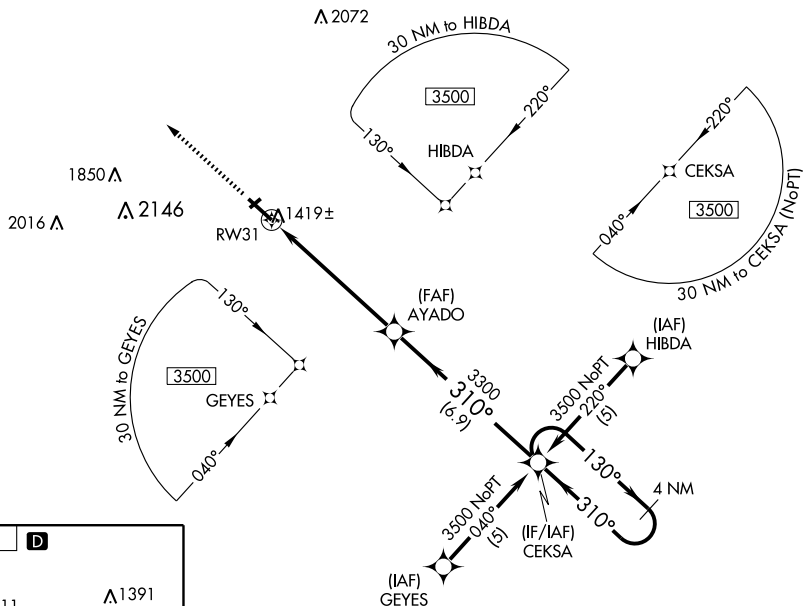
125.45 255.9

CLNC DEL

127.4

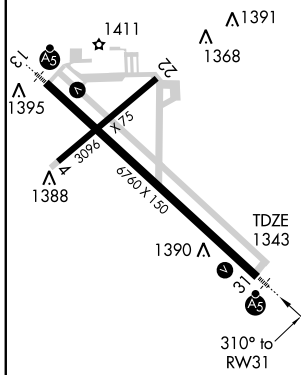
UNICOM

**123.0 (CTAF) **



NC-1. 17 DEC 2009 to 14 JAN 2010

ELEV 1353



3500



* LNAV only

*1. NIM to

AYADO

CEKSA

4 NM
Holding Pattern

$$\frac{130 \rightarrow}{\text{---}} 3500$$
$$\frac{\text{GS } 3.00^\circ}{\text{TCH } 55}$$

CATEGORY	A	B	C	D
GLS PA DA	NA			
LNAV/ VNAV	1700- $\frac{3}{4}$ 357 (400- $\frac{3}{4}$)			
LNAV MDA	1700- $\frac{3}{4}$ 357 (400- $\frac{3}{4}$)			1700-1 357 (400-1)
CIRCLING	1820-1 $\frac{1}{4}$ 467 (500-1 $\frac{1}{4}$)	1840-1 $\frac{1}{4}$ 487 (500-1 $\frac{1}{4}$)	1840-1 $\frac{1}{2}$ 487 (500-1 $\frac{1}{2}$)	1920-2 567 (600-2)

HIRL Rwy 13-31 **L**

V

For inoperative MALS

R

increase S-13 Cat A to 1 mile.

A

LUBYI FIX MINIMUMS: Increase Cat A and B to 1 mile.

MALS

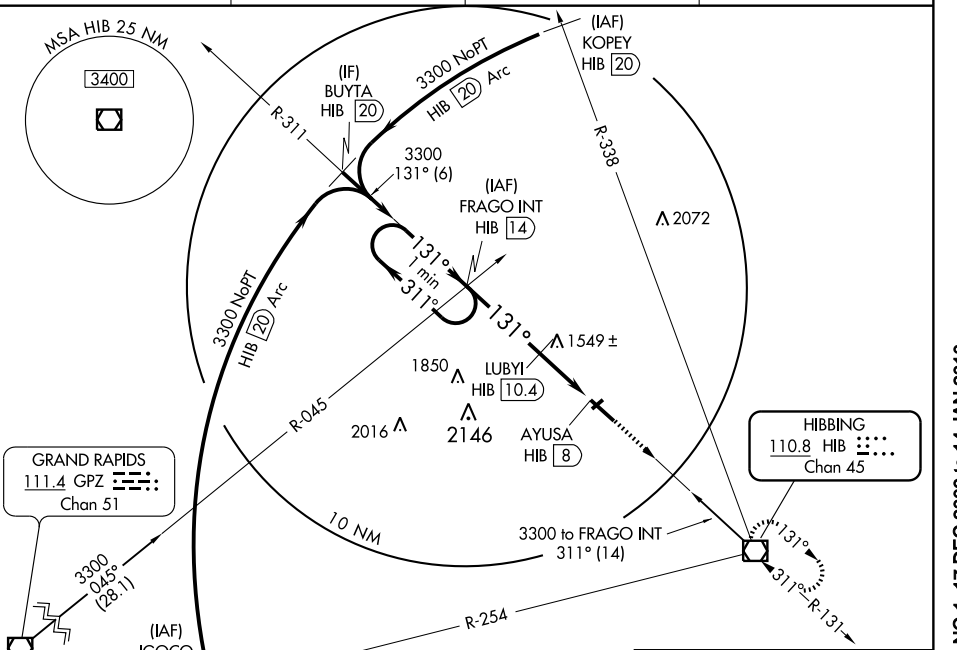
R

AS

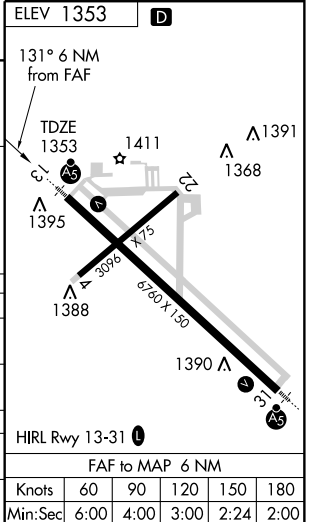
5

MISSED APPROACH: Climb to 3300 direct HIB VOR/DME and hold.

ASOS 126.425	DULUTH APP CON* 125.45 255.9	CLNC DEL 127.4	UNICOM 123.0 (CTAF) U
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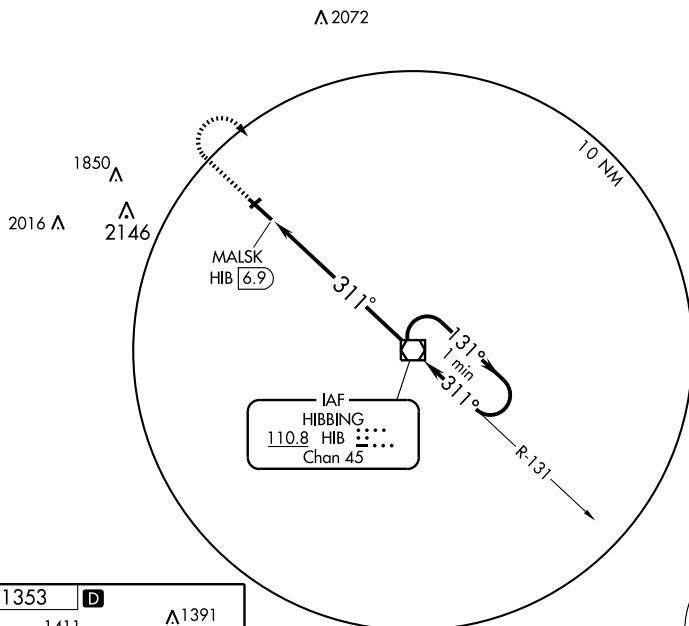
One Minute Holding Pattern				
FRAGO INT HIB 14				
LUBYI HIB 10.4				
HIB 9.2				
AYUSA HIB 8				
3.00° TCH 45				
2180				
3.5 NM 1.2 NM 1.3 NM				
CATEGORY	A	B	C	D
S-13	2180-3/4	827 (900-3/4)	2180-2	2180-2 1/4
			827 (900-2)	827 (900-2 1/4)
CIRCLING	2180-1	2180-1 1/4	2180-2 1/2	2180-2 3/4
	827 (900-1)	827 (900-1 1/4)	827 (900-2 1/2)	827 (900-2 3/4)
LUBYI FIX MINIMUMS				
S-13	1800-3/4 447 (500-3/4)		1800-1 447 (500-1)	
CIRCLING	1820-1	1840-1	1840-1 1/2	1920-2
	467 (500-1)	487 (500-1)	487 (500-1 1/2)	567 (600-2)



NC-1. 17 DEC 2009 to 14 JAN 2010

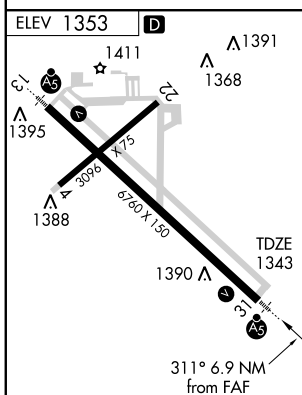
MISSED APPROACH: Climb to 2500 then climbing right turn to 3500 direct HIB VOR/DME and hold.

UNICOM
123.0 (CTAF) **L**



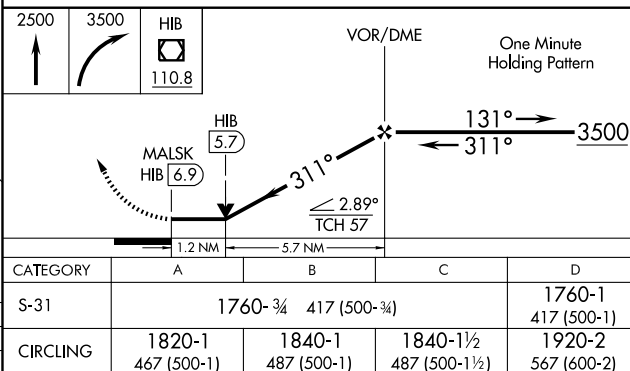
MSA HIB 25 NM

3400

HIRL Rwy 13-31 **L**

FAF to MAP 6.9 NM

Knots	60	90	120	150	180
Min:Sec	6:54	4:36	3:27	2:46	2:18



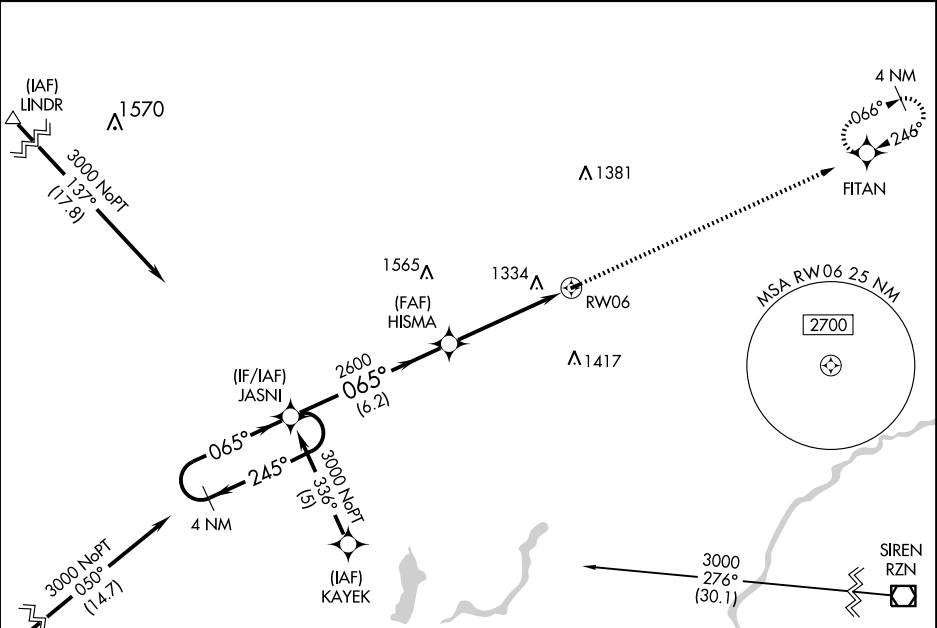
APP CRS	Rwy ldg	2561
065°	TDZE	1021
	Apt Elev	1021

RNAV (GPS) RWY 6

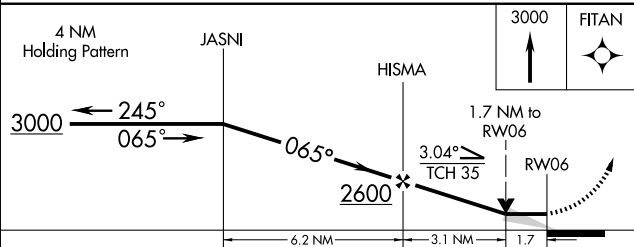
HINCKLEY/ FIELD OF DREAMS (Ø4W)

<div><div>▼</div><div>NA</div></div> <div>DME/DME RNP-0.3 NA. VDP NA when using Mora altimeter setting. When local altimeter setting not received, use Mora altimeter setting and increase all MDAs 60 feet.</div>	MISSED APPROACH: Climb to 3000 direct FITAN and hold.
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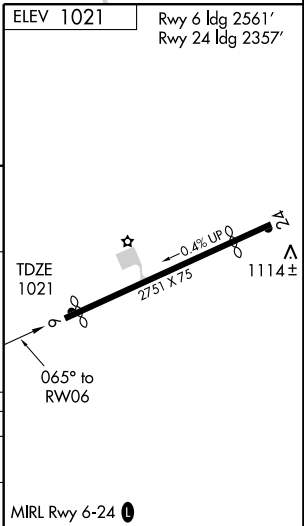
MINNEAPOLIS CENTER 121.05 397.9	CTAF 122.9 0
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Procedure NA for arrivals at RZN VOR/DME via V505 and V13 northeast bound.



CATEGORY	A	B	C	D
LNAV MDA	1600-1	579 (600-1)	NA	NA
CIRCLING	1640-1	619 (700-1)	NA	NA



APP CRS	Rwy ldg	2357
246°	TDZE	1021
	Apt Elev	1021

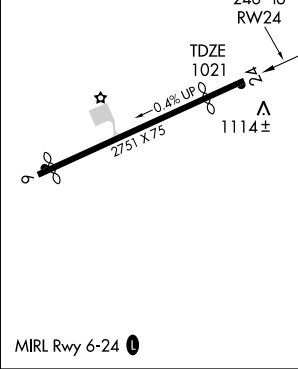
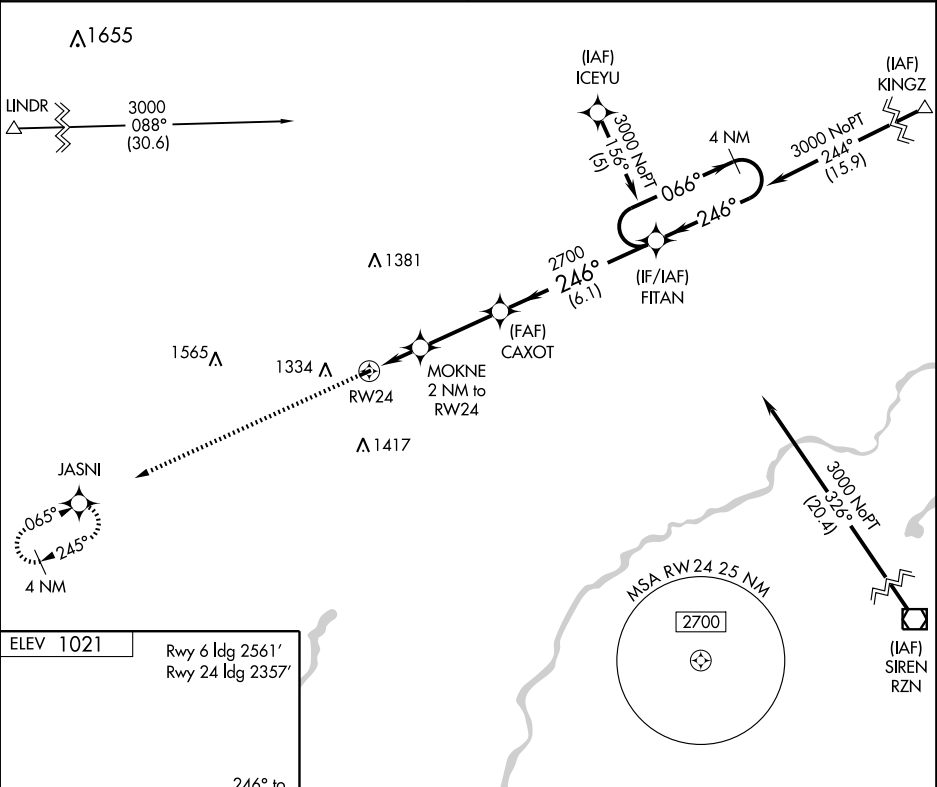
RNAV (GPS) RWY 24

HINCKLEY/ FIELD OF DREAMS (Ø4W)

NA DME/DME RNP-0.3 NA.
When local altimeter setting not received, use Mora altimeter setting and increase all MDAs 60 feet.
VDP NA when using Mora altimeter setting.

MISSED APPROACH: Climb to 3000 direct JASNI and hold.

MINNEAPOLIS CENTER 121.05 397.9	CTAF 122.9
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3000	JASNI	MOKNE 2 NM to RW24	CAXOT	FITAN	4 NM Holding Pattern
		1.3 NM to RW24	3.04° TCH 35	2700	066° → 3000
		1680	246°	246°	
		1.3	0.7	3.1 NM	6.1 NM
CATEGORY	A	B	C	D	
LNAV MDA	1380-1	359 (400-1)	NA	NA	
CIRCLING	1640-1	619 (700-1)	NA	NA	

NDB HCD
209

APP CRS
151°

Rwy Idg	4000
TDZE	1060
Apt Elev	1060

NDB or GPS RWY 15

HUTCHINSON MUNI-BUTLER FIELD (HCD)

A NA

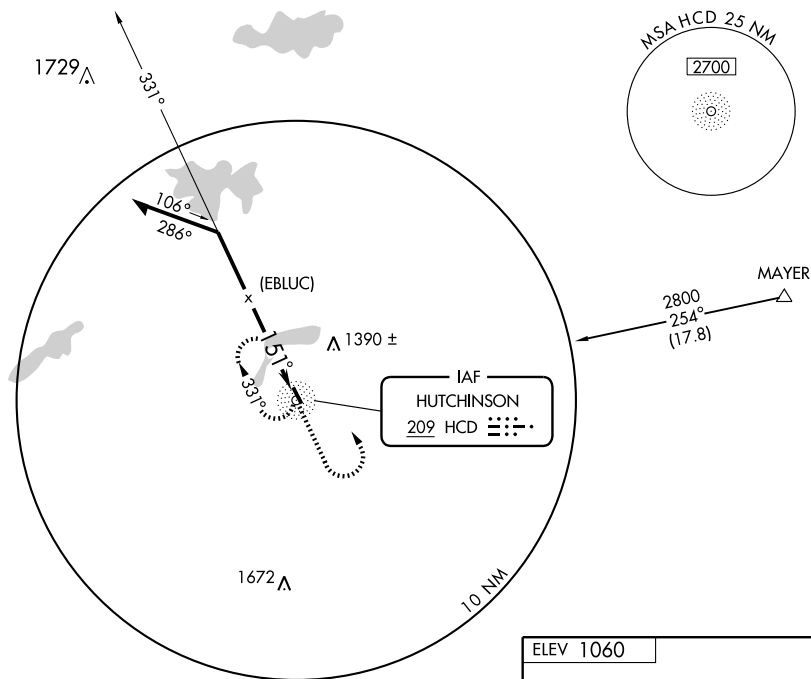
MISSED APPROACH: Climb to 2800, then left turn direct HCD NDB and hold.

AWOS-3
118.525

MINNEAPOLIS CENTER
127.1 290.2

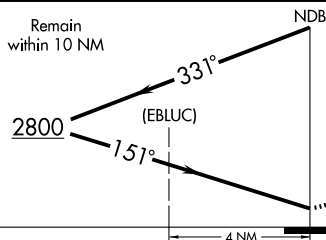
GCO
121.725

UNICOM
122.8 (CTAF) **L**



NC-1. 17 DEC 2009 to 14 JAN 2010

Remain
within 10 NM



2800

HCD

209

ELEV 1060

TDZE
1060

151° to
NDB

4000 x 7

33

CATEGORY	A	B	C	D
S-15	1620-1	560 (600-1)	1620-1½ 560 (600-1½)	NA
CIRCLING	1620-1	560 (600-1)	1620-1½ 560 (600-1½)	NA

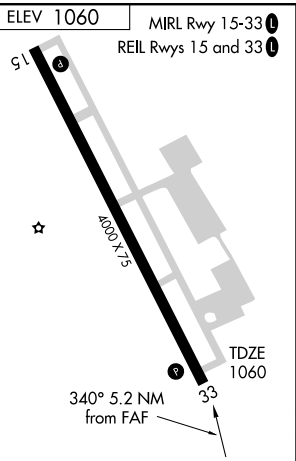
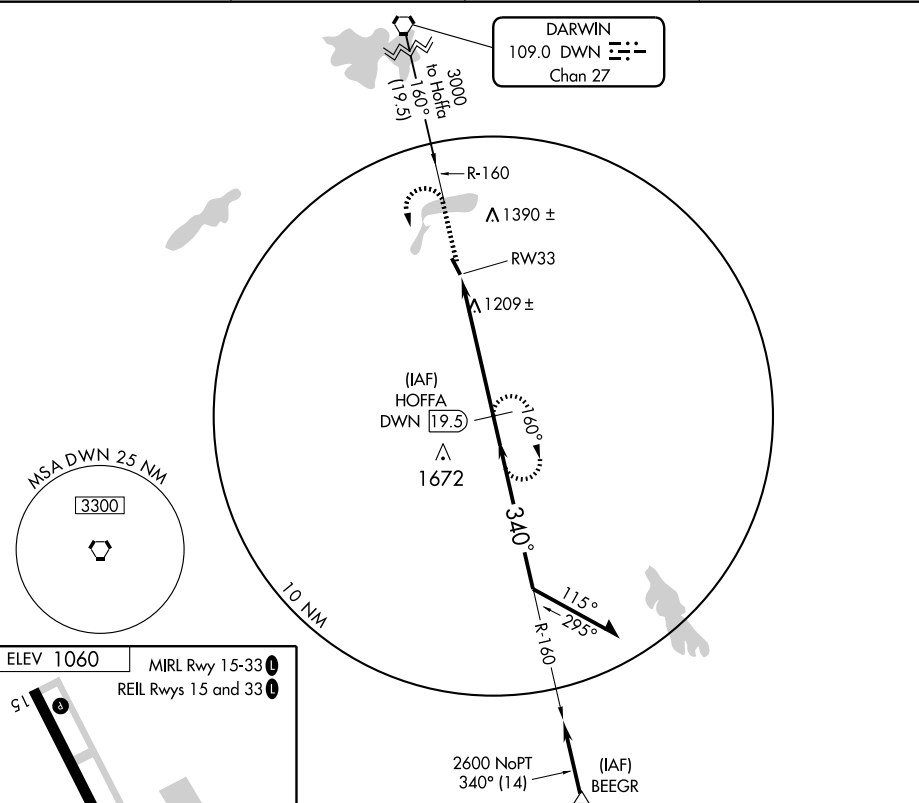
MIRL Rwy 15-33 **L**

REIL Rwy 15 and 33 L

VORTAC DWN	APP CRS	Rwy Idg	4000
109.0	340°	TDZE	1060
Chan 27		Apt Elev	1060

MISSED APPROACH: Climb to 2000 then climbing left turn to 2600 via DWN R-160 to HOFFA/19.5 DME and hold.

AWOS-3 118.525	MINNEAPOLIS CENTER 127.1 290.2	GCO 121.725	UNICOM 122.8 (CTAF) 1
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2000	2600	HOFFA DWN 19.5	HOFFA DWN 19.5	Remain within 10 NM
↑	DWN R-160			
	RW33 DWN 14.3			
		2600	2600	
		5.2 NM		
CATEGORY	A	B	C	D
S-33	1460-1	400 (400-1)		NA
CIRCLING	1540-1	480 (500-1)	1540-1½ 480 (500-1½)	NA

LOC I-ABK <u>109.1</u>	APP CRS 133°	Rwy Idg TDZE Apt Elev	7400 1184 1185
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ILS or LOC/DME RWY 13

INTERNATIONAL FALLS/FALLS INTL (INL)

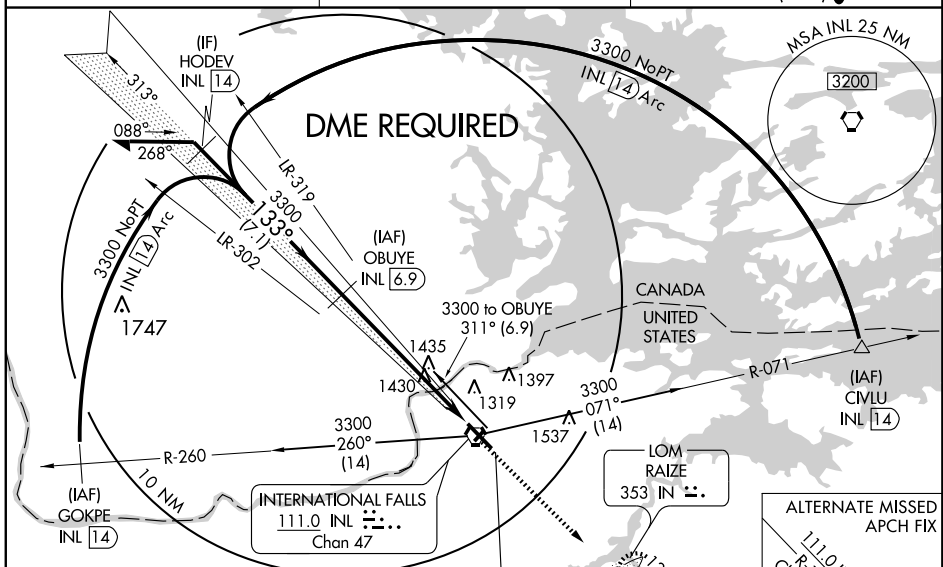
- ⚠** When local altimeter setting not received, use Baudette altimeter setting and increase DAs 120 feet and S-ILS 13 visibility $\frac{1}{4}$ mile all Cats, increase all MDAs 140 feet and S-LTC 13 Cat B visibility $\frac{1}{4}$ mile, Cat C and D $\frac{1}{2}$ mile, increase Circling Cat B visibility $\frac{1}{4}$ mile, Cat C and D $\frac{1}{2}$ mile. For inoperative MALSR when using Baudette altimeter setting, increase S-ILS 13 visibility $\frac{1}{2}$ mile all Cats.
- ADF required. Circling to Rwy 4-22 NA at night.
- DME from INL VORTAC. Simultaneous reception of I-ABK and INL DME required.

MALSR

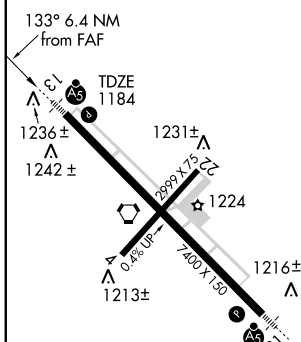


MISSED APPROACH: Climb to 3400 direct IN LOM and hold.

ASOS 120.0	MINNEAPOLIS CENTER 120.9 377.1	UNICOM 122.8 (CTAF) 0
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ELEV 1185	D
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HIRL Rwy 13-31 **L**[illegible]

NDB RWY 31

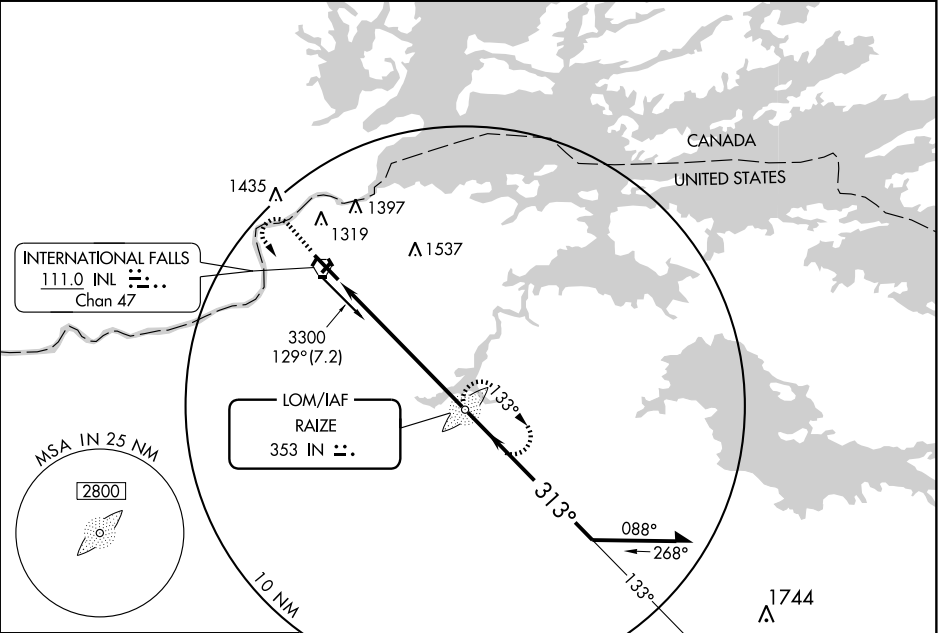
INTERNATIONAL FALLS/FALLS INTL (INL)

LOM IN	APP CRS	Rwy Idg	7400
353	313°	TDZE	1166
		Apt Elev	1185

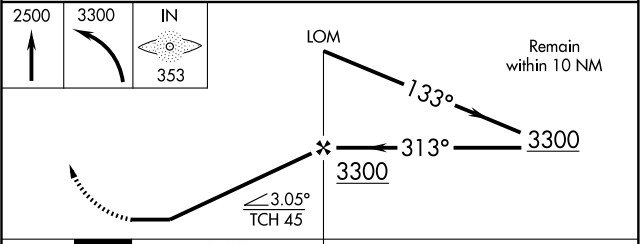
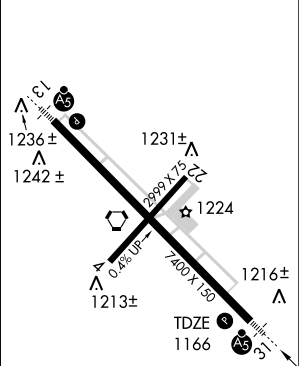
NA Circling to Rwy 4-22 NA at night.
When local altimeter setting not received, use Baudette altimeter setting and increase all MDAs 140 feet, and S-31 Cats C/D visibility ½ mile, Circling Cat C ½ mile, Cat D ½ mile.

MALSR
A5 MISSED APPROACH: Climb to 2500 then climbing left turn to 3300 direct IN LOM and hold.

ASOS 120.0	MINNEAPOLIS CENTER 120.9 377.1	UNICOM 122.8 (CTAF) 0
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ELEV 1185 **D**



FAF to MAP 6.5 NM		CATEGORY		A	B	C	D
S-31				1700-¾	534 (600-¾)	1700-1 534 (600-1)	1700-1½ 534 (600-1½)
CIRCLING				1700-1	515 (600-1)	1700-1½ 515 (600-1½)	1780-2 595 (600-2)
Knots	60 90 120 150 180						
Min:Sec	6:30 4:20 3:15 2:36 2:10						

RNAV (GPS) RWY 13

INTERNATIONAL FALLS/FALLS INTL (INL)

WAAS CH 53706 W13A	APP CRS 133°	Rwy Idg TDZE Apt Elev	7400 1184 1185
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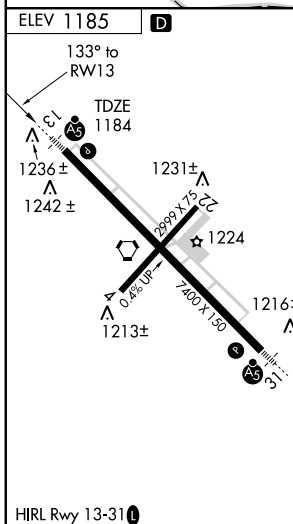
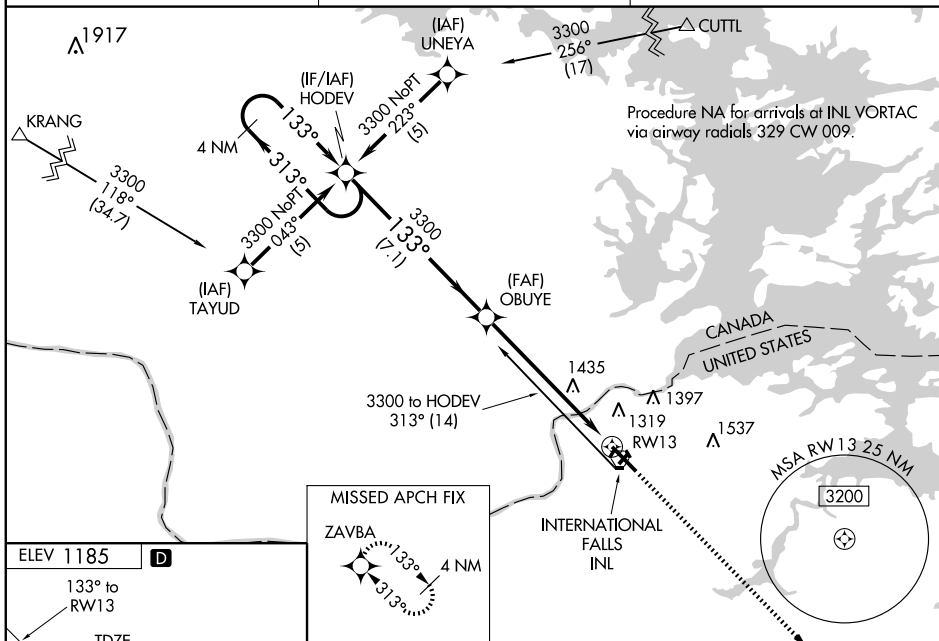
T When local altimeter setting not received, use Baudette altimeter setting and increase all DAs 127 feet, increase LPV visibility $\frac{1}{4}$ mile all Cats, and LNAV/VNAV visibility $\frac{3}{4}$ mile all Cats, increase all MDAs 140 feet, increase LNAV Cat C and D visibility $\frac{1}{2}$ mile, Circling Cat C visibility $\frac{1}{2}$ mile and Cat D visibility $\frac{1}{4}$ mile. For inoperative MALS when using Baudette altimeter setting, increase LPV visibility $\frac{1}{2}$ mile all Cats, inoperative table does not apply to LNAV/VNAV. VDP NA when using Baudette altimeter setting. Baro-VNAV NA when using Baudette altimeter setting. Circling to Rwy 4-22 NA at night. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 47°C (116°F). DME/DME RNP-0.3 NA.

MALS



MISSED APPROACH:
Climb to 3400 direct
ZAVBA and hold.

ASOS 120.0	MINNEAPOLIS CENTER 120.9 377.1	UNICOM 122.8 (CTAF) 0
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MISSED APCH FIX

ZAVBA

4 NM
Holding Pattern

HODEV

OBUYE

3400

ZAVBA

3300

313°

133°

133°

3300

*1.6 NM to

RW13

*LNAV only

GS 3.00°

TCH 50

7.1 NM

4.8 NM

1.6

CATEGORY

A

B

C

D

LPV

DA

1434-1/2

250

(300-1/2)

LNAV/VNAV

DA

1669-1 1/4

485

(500-1 1/4)

LNAV

MDA

1760-1/2

576

(600-1/2)

1760-1

576

(600-1)

1760-1 1/4

576

(600-1 1/4)

CIRCLING

1760-1

575

(600-1)

1760-1 1/2

575

(600-1 1/2)

1780-2

595

(600-2)

1780-2

595

(600-2)

HIRL Rwy 13-31 **0**

WAAS CH 78406 W31A	APP CRS 313°	Rwy Idg 7400 TDZE 1166 Apt Elev 1185
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RNAV (GPS) RWY 31

INTERNATIONAL FALLS/FALLS INTL (INL)

T When local altimeter setting not received, use Baudette altimeter setting and increase all DAs 127 feet, and LPV and LNAV/VNAV visibility $\frac{1}{2}$ mile all Cats, increase all MDAs 140 feet and LNAV Cat C visibility $\frac{1}{4}$ mile and Circling Cat C and D visibility $\frac{1}{4}$ mile.

A For inoperative MALS R when using Baudette altimeter setting, increase LPV visibility $\frac{1}{2}$ mile all Cats. For inoperative MALS R, increase LPV visibility $\frac{1}{2}$ mile all Cats, inoperative table does not apply to LNAV Cat D. VDP NA when using Baudette altimeter setting. Baro-VNAV NA when using Baudette altimeter setting.

W Circling to Rwy 4-22 NA at night. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 47°C (116°F). DME/DME RNP-0.3 NA.

MALSR



MISSED APPROACH:
Climb to 3300 direct
HODEV and hold.

ASOS 120.0	MINNEAPOLIS CENTER 120.9 377.1	UNICOM 122.8 (CTAF) 0
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MISSED APCH FIX

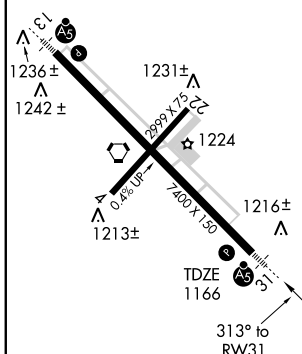


MSA RW31 25 NM

3200

ELEV 1185

D

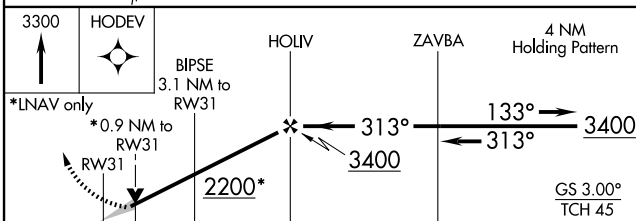


1166

313° to

RW31

1976]



		0.9	2.2 NM	← 3.7 NM →	← 6.5 NM →	
CATEGORY		A		B		C
LPV	DA	1462-1/2		296 (300-1/2)		
LNAV/ VNAV	DA	1500-3/4		334 (400-3/4)		
LNAV	MDA	1500-1/2 334 (400-1/2)				1500-1 334 (400-1)
CIRCLING		1620-1 435 (500-1)	1680-1 495 (500-1)	1680-1 1/2 495 (500-1 1/2)	1780-2 595 (600-2)	

NC-1. 17 DEC 2009 to 14 JAN 2010

HIRL Rwy 13-31 **L**

VORTAC INL <u>111.0</u> Chan 47	APP CRS 305°	Rwy Idg 7400 TDZE 1166 Apt Elev 1185
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VOR/DME RWY 31
INTERNATIONAL FALLS/FALLS INTL (INL)

T Circling to Rwy 4-22 NA at night.
A When local altimeter setting not received, use Baudette altimeter setting and increase all MDAs 140 feet, increase S-31 Cat C and D visibility $\frac{1}{4}$ mile, and Circling Cat C and D visibility $\frac{1}{4}$ mile.

MALSR

MISSED APPROACH: Climb to 2000 then climbing left turn to 2900 via INL VORTAC R-125 to DICES/6 DME and hold.

ASOS
120.0

MINNEAPOLIS CENTER
120.9 377.1

UNICOM
122.8 (CTAF) **L**

1747

CANADA
UNITED STATES

INTERNATIONAL FALLS
111.0 INL $\frac{\div}{\div} \dots$
Chan 47

CANADA
UNITED STATES
(IAF)
YUPNU
INL 12

(IA
DICE
INL

305

290
305°

MSA INL 25 NM

3200

ELEV 1185

D

2000

2900

DICES
INL 6DICES
INL 6

One Minute Holding Pattern

VORT

INL
D
2
$$\begin{array}{r} 125^\circ \rightarrow \\ \hline 2900 \end{array}$$

CATEGORY

A

B

C

D

52

1420.16

00 14

 $20 - \frac{3}{4}$

20-1

CIRCUITO

1620-1

680-

0-1½

80-2

HIRL Rwy 13-31 **L**

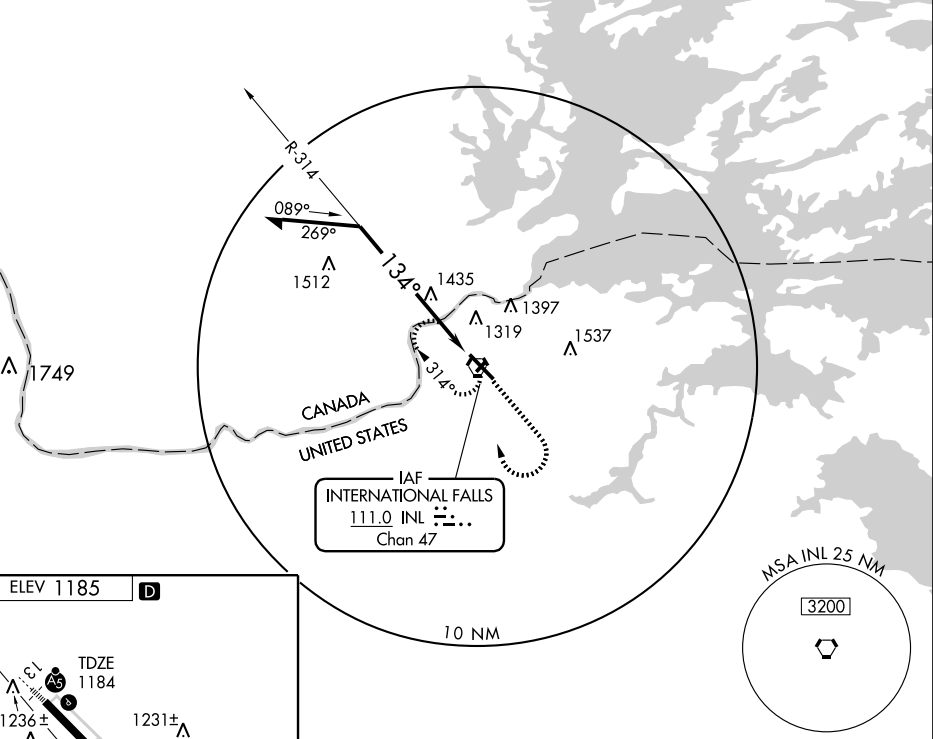
VORTAC INL	APP CRS	Rwy Idg	7400
111.0	134°	TDZE	1184
Chan 47		Apt Elev	1185

⚠ Circling to Rwy 4-22 NA at night.
⚠ VDP NA when using Baudette altimeter setting.
When local altimeter setting not received, use Baudette altimeter setting and increase all MDAs 140 feet, and S-13 Cats A/B visibility ¼ mile, Cats C/D visibility ½ mile. Increase Circling Cat B visibility ¼ mile, Cat C and D ½ mile. For inoperative MALSR when using Baudette altimeter setting, increase S-13 Cat A visibility ¼ mile.

MALSR

MISSED APPROACH: Climb to 2900 then right turn direct INL VORTAC and hold.

ASOS 120.0	MINNEAPOLIS CENTER 120.9 377.1	UNICOM 122.8 (CTAF)
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ELEV 1185 **D**

HIRL Rwy 13-31

Remain within 10 NM

2900			INL 111.0
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CATEGORY	A	B	C	D
S-13	1880-½ 696 (700-½)		1880-1½ 696 (700-1½)	1880-1¾ 696 (700-1¾)
CIRCLING	1880-1 695 (700-1)		1880-2 695 (700-2)	1880-2¼ 695 (700-2¼)

NC-1. 17 DEC 2009 to 14 JAN 2010

For inoperative MALSR, increase S-31 Cat. D visibility to 1 1/4 .

Circling to Rwy 4-22 NA at night.

MALSR

MISSED APPROACH: Climb to 2900 then left turn direct INL VORTAC and hold.

ASOS 120.0	MINNEAPOLIS CENTER 120.9 377.1	UNICOM 122.8 (CTAF) 0
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ELEV 1185

D

HIRL Rwy 13-31 0

2900			INL 111.0	VORTAC	Remain within 10 NM
				123°	2900
				303°	
CATEGORY	A	B	C	D	
S-31	1600-1/2	426 (500-1/2)	1600-3/4 426 (500-3/4)	1600-1 426 (500-1)	
CIRCLING	1620-1 435 (500-1)	1680-1 495 (500-1)	1680-1 1/2 495 (500-1 1/2)	1840-2 655 (700-2)	

NC-1. 17 DEC 2009 to 14 JAN 2010

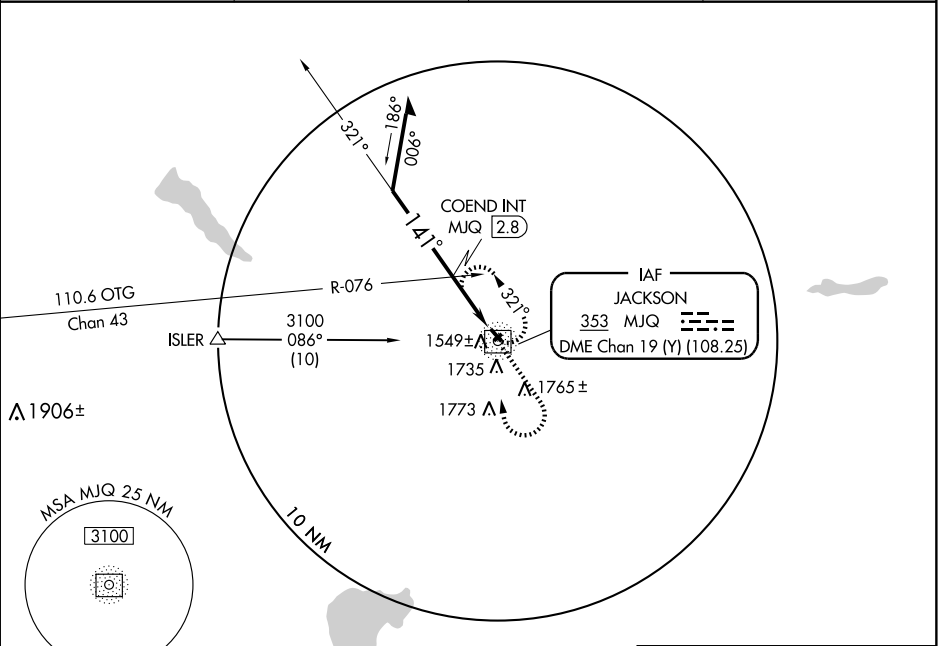
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▲

When local altimeter setting not received, use Estherville altimeter setting and increase all MDAs 60 feet and COEND FIX minimums S-13 visibility Cat C ¼ mile and circling Cat C ½ mile.

MISSED APPROACH: Climb to 3100 then right turn direct MJQ NDB/DME and hold.

AWOS-3 353	MINNEAPOLIS CENTER 127.75 257.7	GCO 121.725	UNICOM 122.8 (CTAF) 0
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*2180 when using Estherville altimeter setting.

Remain within 10 NM

3100

321°

COEND INT MJQ 2.8

141°

2120*

2.8 NM

3100

NDB/DME

MJQ 353

ELEV 1446

141° to NDB/DME

TDZE 1445

3591 X 75

7250 X 300

31

CATEGORY	A	B	C	D
S-13	2120-1	675 (700-1)	2120-2 675 (700-2)	NA
CIRCLING	2120-1	674 (700-1)	2120-2 674 (700-2)	NA
COEND FIX MINIMUMS				
S-13	1940-1	495 (500-1)	1940-1½ 495 (500-1½)	NA
CIRCLING	2040-1	594 (600-1)	2040-1½ 594 (600-1½)	NA

REIL Rwy 13 and 31 0

MIRL Rwy 13-31 0

APP CRS	Rwy Idg	3591
134°	TDZE	1445
	Apt Elev	1446

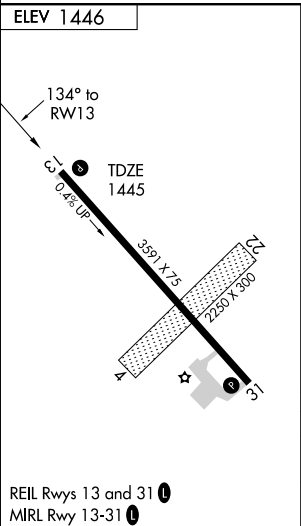
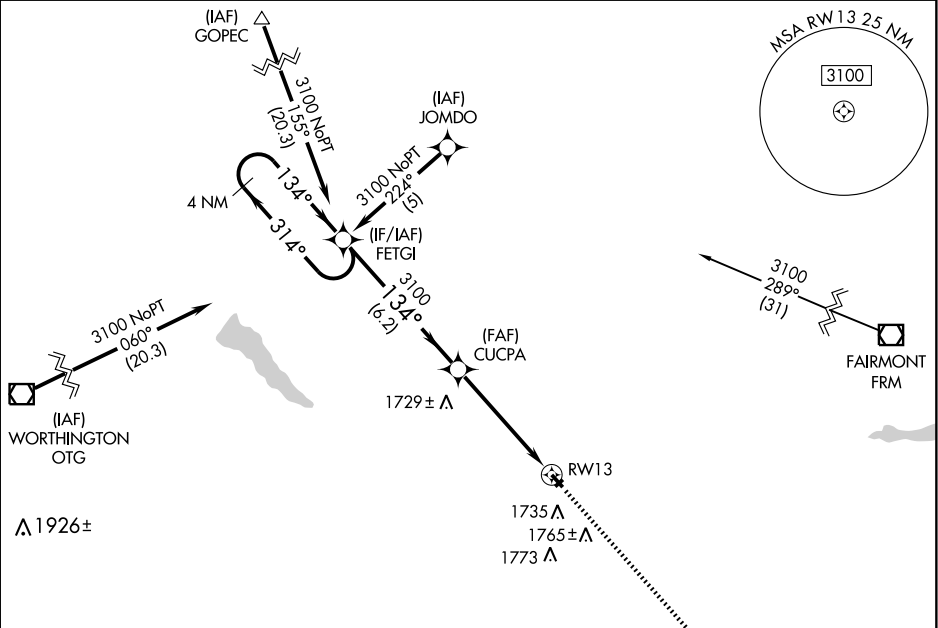
RNAV (GPS) RWY 13

JACKSON MUNI (MJQ)

⚠ DME/DME RNP -0.3 NA.
⚠ Visibility reduction by helicopters NA.
When local altimeter setting not received, use Estherville altimeter setting and increase all MDAs 60 feet and visibility Cat C ¼ mile.

MISSED APPROACH: Climb to 4200 direct MCGIN and hold.

AWOS-3 353	MINNEAPOLIS CENTER 127.75 257.7	GCO 121.725	UNICOM 122.8 (CTAF) 0
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Procedure NA for arrivals at OTG VOR/DME via V250 southwest bound.

CATEGORY	4 NM Holding Pattern		4200 MCGIN	
	FETGI	CUCPA		
LNAV MDA	1920-1	475 (500-1)	1920-1¼ 475 (500-1¼)	NA
CIRCLING	2040-1	594 (600-1)	2040-1½ 594 (600-1½)	NA

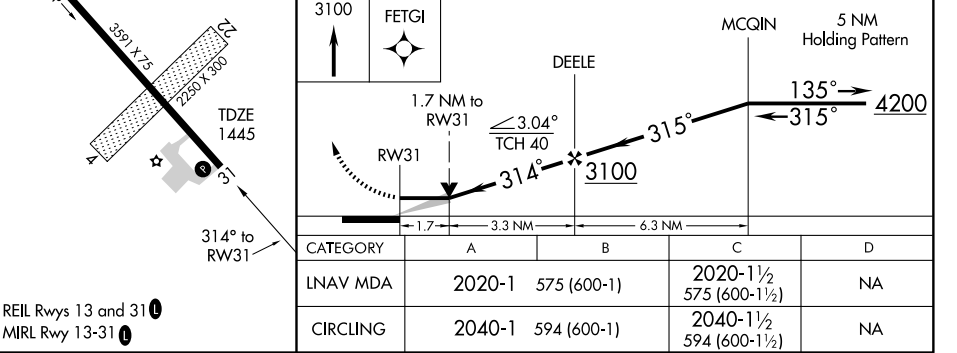
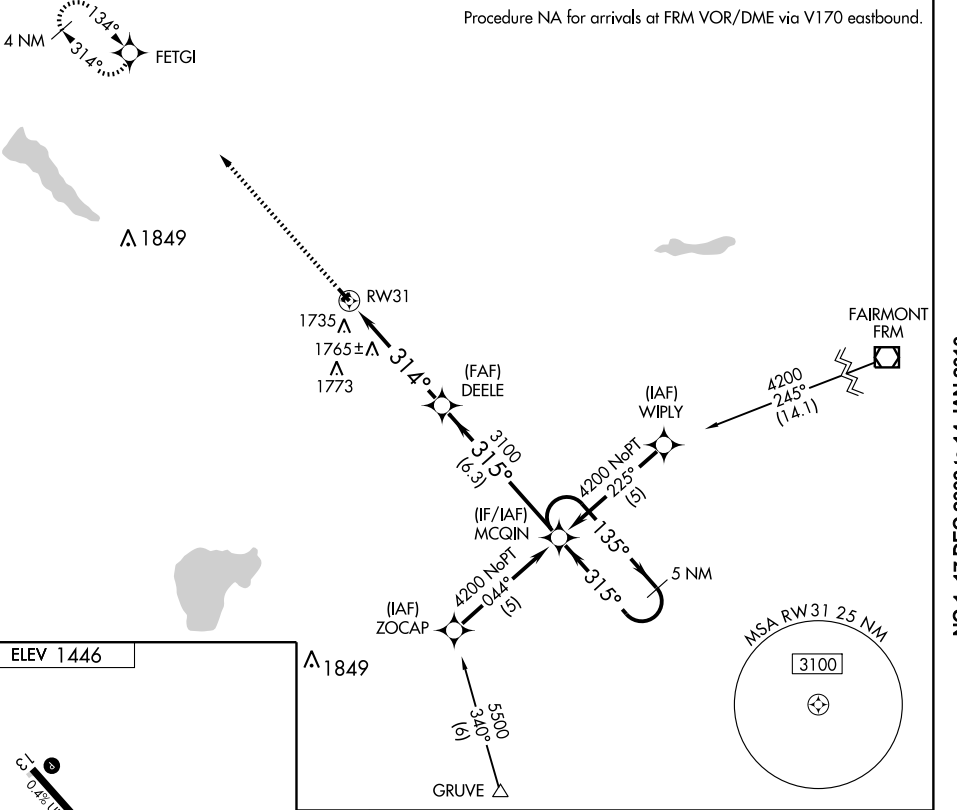
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DME/DME RNP -0.3 NA.
When local altimeter setting not received, use Estherville altimeter setting and increase all MDAs 60 feet and visibility Cat C ¼ mile.

MISSED APPROACH: Climb to 3100 direct FETGI and hold.

AWOS-3 353	MINNEAPOLIS CENTER 127.75 257.7	GCO 121.725	UNICOM 122.8 (CTAF) 0
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AWOS-3

109.0

MINNEAPOLIS CENTER

125.5 323.1

CTAF

122.9

MISSED APPROACH: Climb to 1800 then climbing right turn to 2800 direct DWN VORTAC and hold.

	1800	2800	DWN	(EBVOF)	ANIML	4 NM
	↑	↷	109.0	5 NM from MAP WP	WP	Holding Pattern
				312°	132°	2800
				3.04°	312°	
				1.1 NM	3.9 NM	5 NM
CATEGORY	A	B	C	D		
S-31	1540-1	400 (400-1)		1540-1½ 400 (400-1½)		
CIRCLING	1600-1	460 (500-1)	1600-1½ 460 (500-1½)	1800-2 660 (700-2)		

NC-1. 17 DEC 2009 to 14 JAN 2010

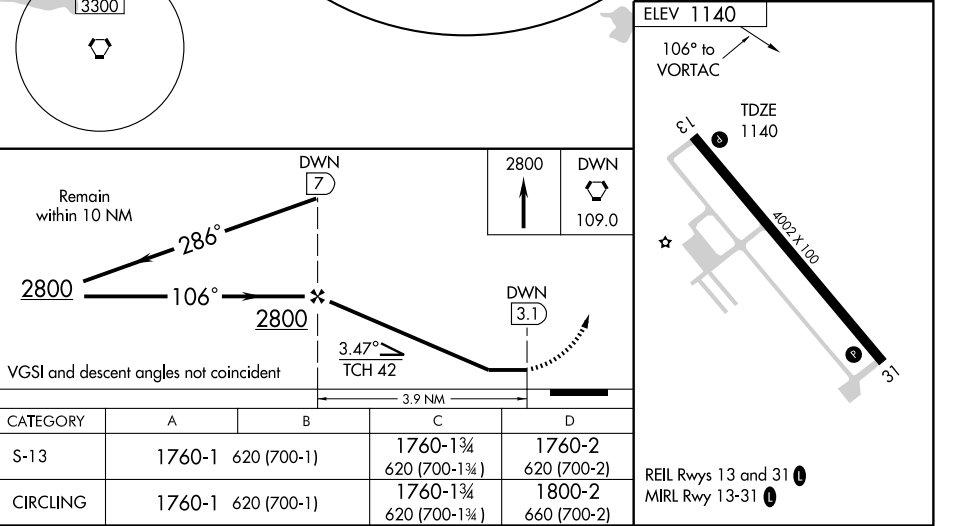
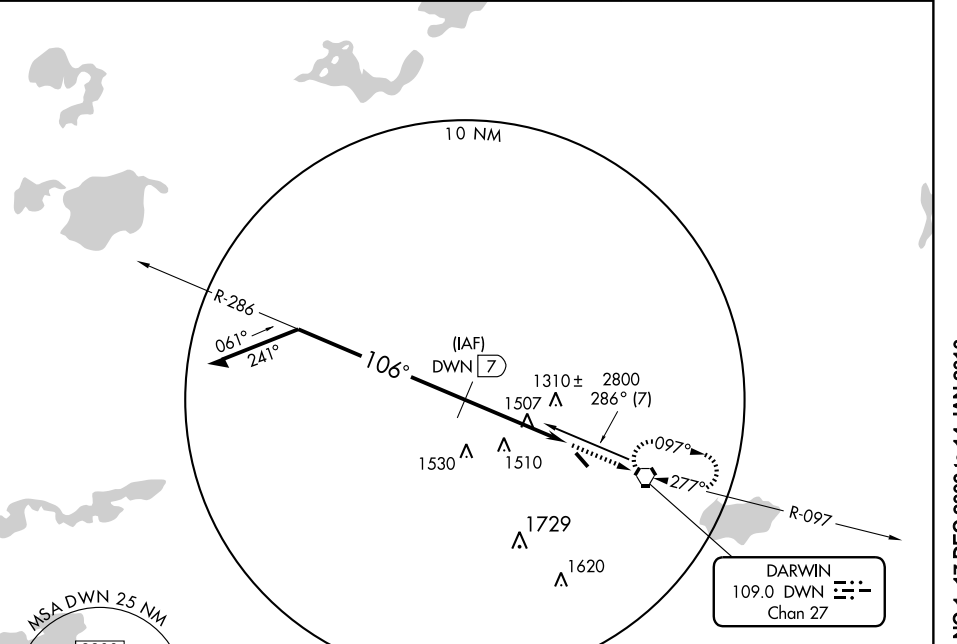
VORTAC DWN 109.0 Chan 27	APP CRS 106°	Rwy Idg TDZE Apt Elev	4002 1140 1140
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MISSED APPROACH: Climb to 2800 direct DWN VORTAC and hold.

AWOS-3
109.0

MINNEAPOLIS CENTER
125.5 323.1

CTAF
122.9 0

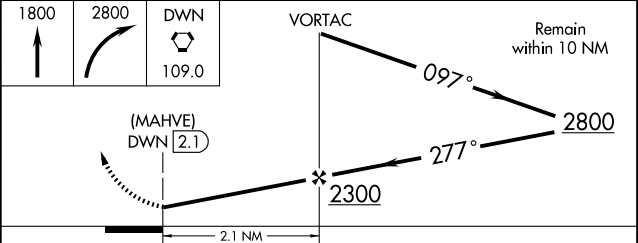
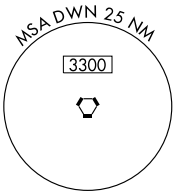
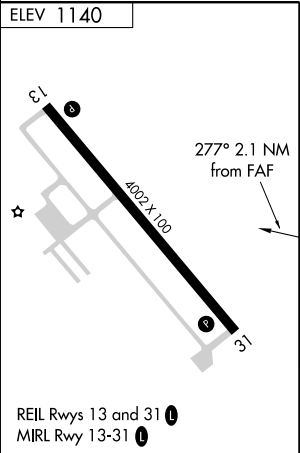
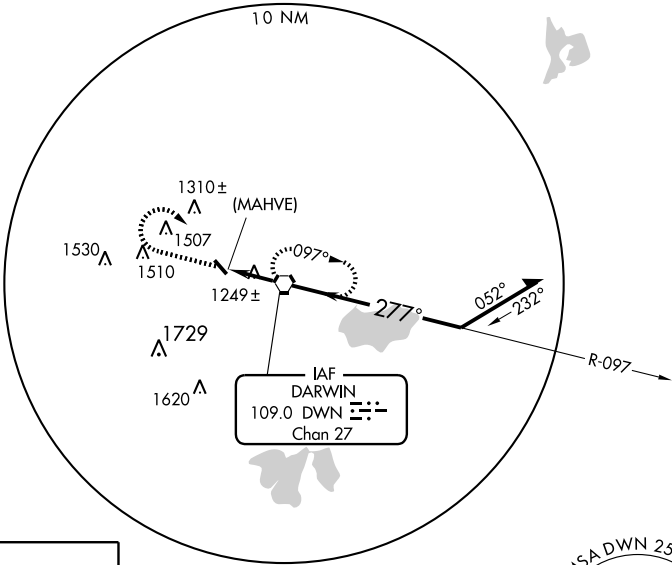


VOR or GPS-A
LITCHFIELD MUNI (LJF)

VORTAC DWN 109.0 Chan 27	APP CRS 277°	Rwy Idg TDZE Apt Elev N/A 1140
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MISSED APPROACH: Climb to 1800 then climbing right turn to 2800 direct DWN VORTAC and hold.

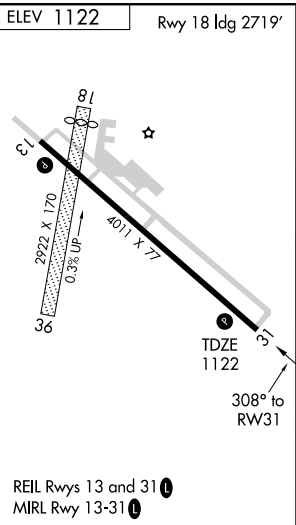
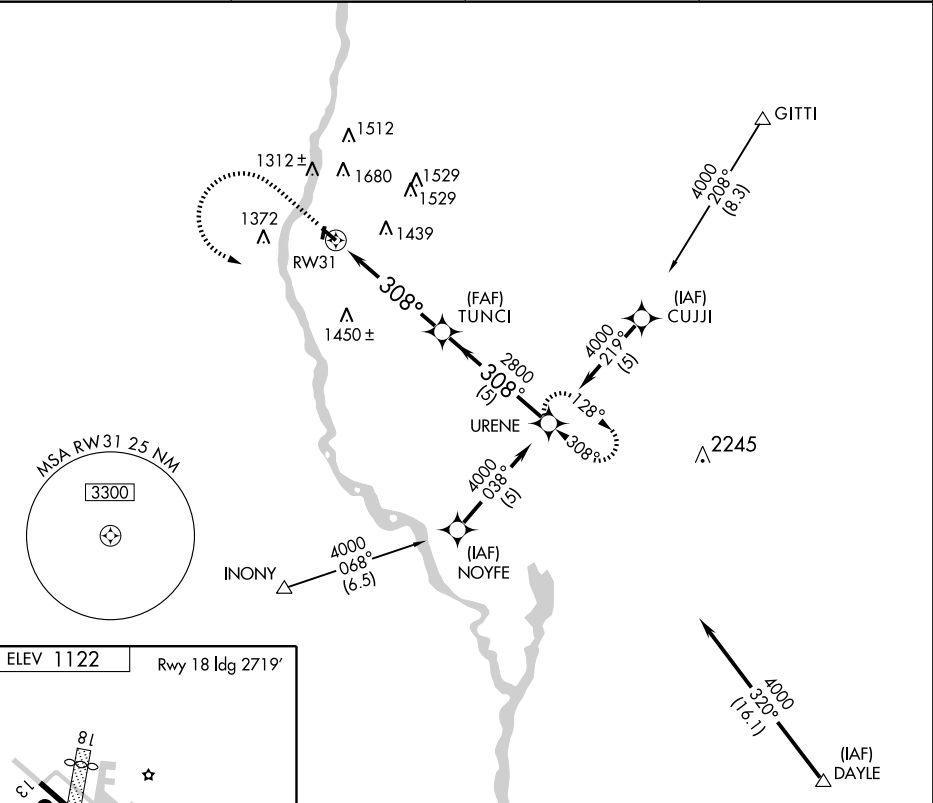
AWOS-3 109.0	MINNEAPOLIS CENTER 125.5 323.1	CTAF 122.9
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FAF to MAP 2.1 NM						CATEGORY	A	B	C	D
Knots	60	90	120	150	180	CIRCLING	1600-1	460 (500-1)	1600-1½ 460 (500-1½)	1800-2 660 (700-2)
Min:Sec	2:06	1:24	1:03	0:50	0:42					

APP CRS	Rwy Idg	4011
308°	TDZE	1122
	Apt Elev	1122

<div><div>▼</div><div>▲ NA</div></div>		MISSED APPROACH: Climb to 3000 then climbing left turn to 4000 direct URENE WP and hold.	
AWOS-3 359	MINNEAPOLIS CENTER 118.05 239.0	GCO 121.725	UNICOM 122.8 (CTAF) 0





<div>3000 4000 URENE</div>		TUNCI		URENE
<div>1.5 NM to RW31</div>		<div>308° 2800</div>		4000
<div>≤ 3.09° TCH 40</div>		<div>5 NM</div>		Procedure Turn NA
CATEGORY	A	B	C	D
S-31	1660-1	538 (600-1)	1660-1½ 538 (600-1½)	1660-1¾ 538 (600-1¾)
CIRCLING	1700-1 578 (600-1)	1720-1 598 (600-1)	1720-1½ 598 (600-1½)	1980-2¾ 858 (900-2¾)

NC-1. 17 DEC 2009 to 14 JAN 2010

NDB LXL 359	APP CRS 312°	Rwy Idg 4011 TDZE 1122 Apt Elev 1122
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NDB RWY 31

LITTLE FALLS/MORRISON COUNTY, CHARLES A. LINDBERGH FIELD (LXL)

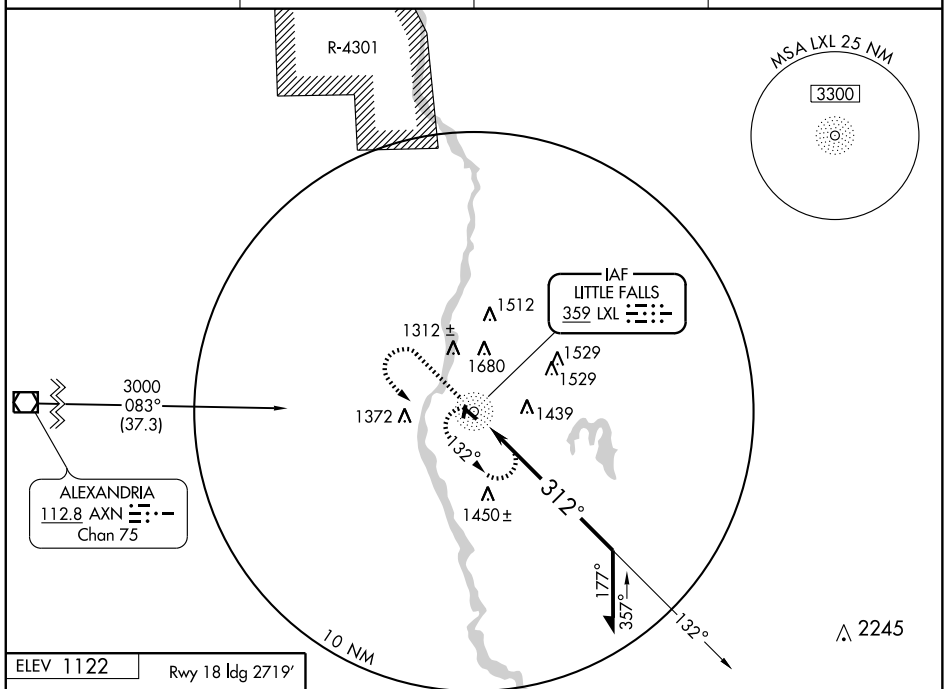
  NA	MISSED APPROACH: Climb to 3000 then left turn direct LXL NDB and hold.
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AWOS-3
359

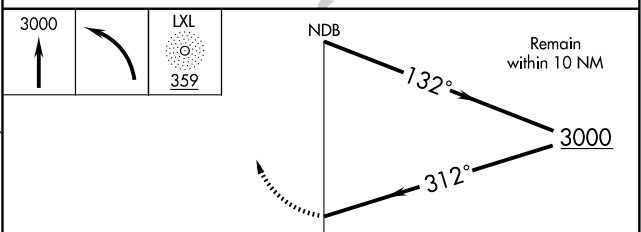
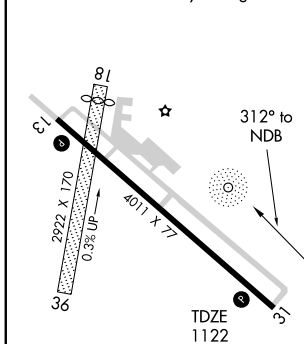
MINNEAPOLIS CENTER
118.05 239.0

GCO
121.725

UNICOM
122.8 (CTAF) **L**



ELEV 1122	Rwy 18 ldg 2719'
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CATEGORY	A	B	C	D
S-31	1840-1	718 (800-1)	1840-2 718 (800-2)	1840-2¼ 718 (800-2¼)
CIRCLING	1840-1	718 (800-1)	1840-2 718 (800-2)	1980-2¾ 858 (900-2¾)

REIL Rwy 13 and 31 **L**
MIRL Rwy 13-31 **L**

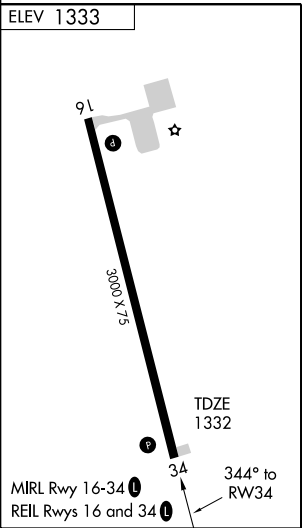
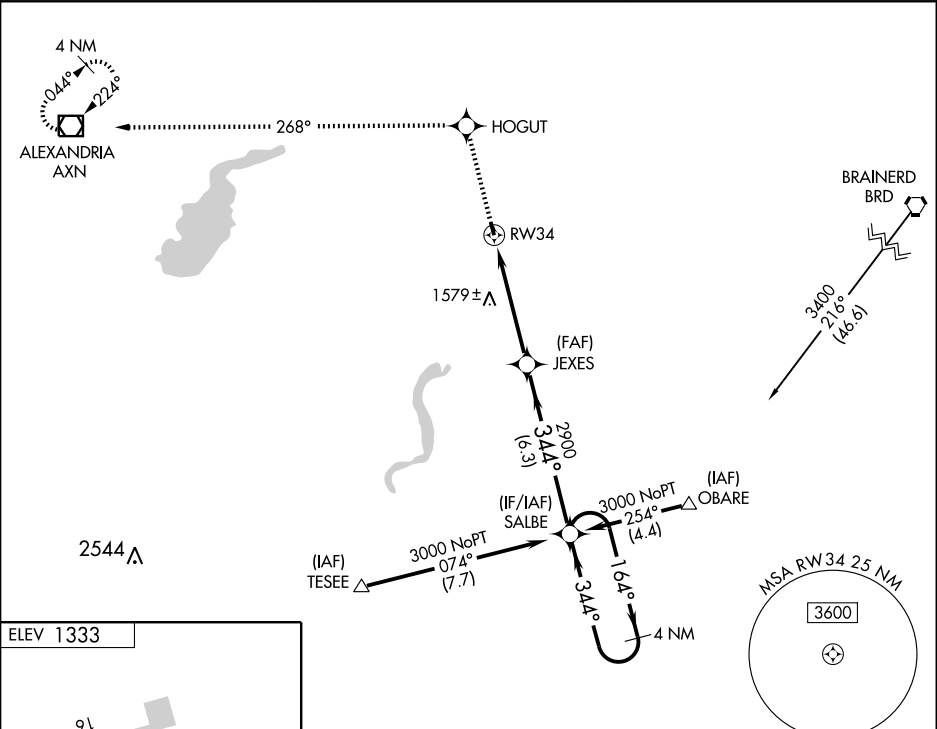
APP CRS	Rwy Idg	3000
344°	TDZE	1332
	Apt Elev	1333

RNAV (GPS) RWY 34

LONG PRAIRIE/TODD FIELD (14Y)

<div><div>Procedure NA at night. DME/DME RNP- 0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Alexandria altimeter setting.</div><div>MISSED APPROACH: Climb to 3000 direct HOGUT and via 268° track to ALEXANDRIA VOR/DME and hold.</div></div>

AWOS-3 118.650	MINNEAPOLIS CENTER 126.1 269.2	CTAF 122.9
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Procedure NA for arrivals at OBARE via V2 southeast bound.
Procedure NA for arrival on BRD VORTAC airway radials 156 CW 171.

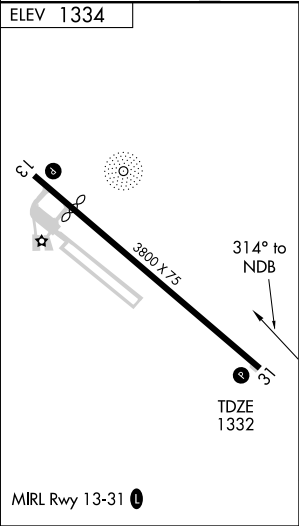
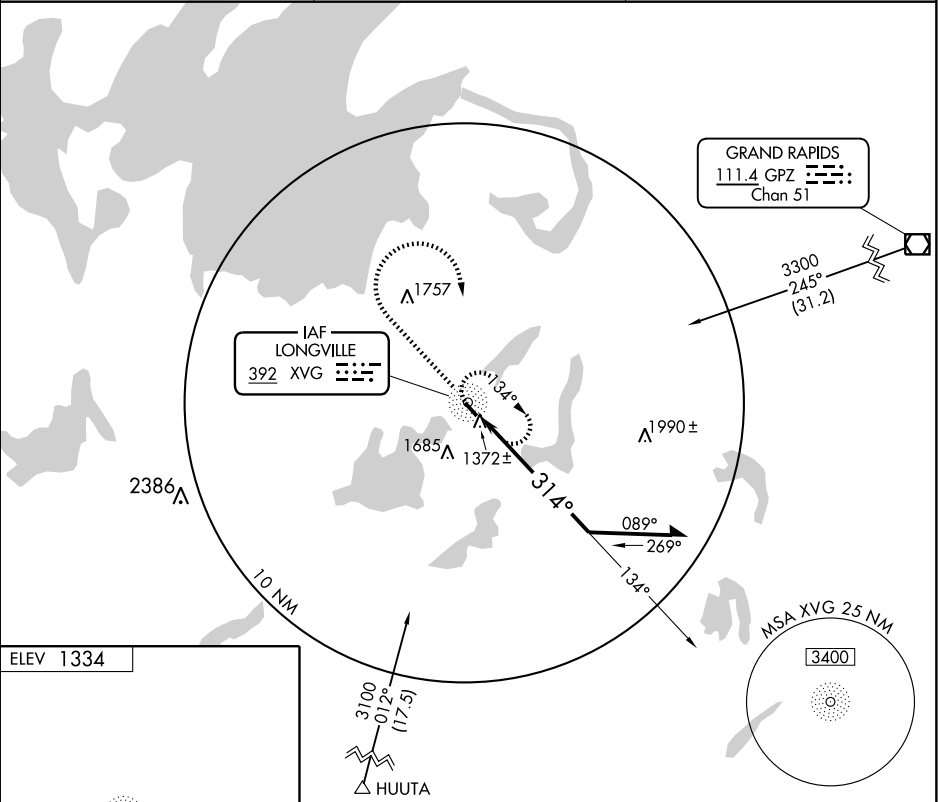
3000 ↑	HOGUT ✦	268° trk	AXN ◻	SALBE 4 NM Holding Pattern	
<div><div><div><div>RW34 ↙</div><div>≤ 3.04° TCH 40</div></div><div><div>JEXES ✱</div><div>2900</div></div><div><div>344°</div><div>164° →</div><div>← 344°</div><div>3000</div></div></div><div><div>4.8 NM</div><div>6.3 NM</div></div><div>VGSI and descent angles not coincident.</div></div>					
CATEGORY	A	B	C	D	
LNAB MDA	1900-1	568 (600-1)	1900-1½ 568 (600-1½)	NA	
CIRCLING	1900-1	567 (600-1)	1900-1½ 567 (600-1½)	NA	




NDB XVG	APP CRS	Rwy Idg	3800
392	314°	TDZE	1332
		Apt Elev	1334

NDB RWY 31
LONGVILLE MUNI (XVG)

NA	MISSED APPROACH: Climb to 3100 then right turn direct XVG NDB and hold.
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AWOS-3 392	MINNEAPOLIS CENTER 118.05 239.0	CTAF 122.9 0
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<div><div><div>3100</div><div></div></div><div><div></div><div><div>XVG</div><div></div><div>392</div></div></div></div> <div><div>NDB</div><div><div>134°</div><div>3100</div></div><div><div>314°</div></div><div>Remain within 10 NM</div></div>				
CATEGORY	A	B	C	D
S-31	1920-1	588 (600-1)	NA	
CIRCLING	1920-1	586 (600-1)	NA	

APP CRS 315°
Rwy Idg 3800
TDZE 1332
Apt Elev 1334

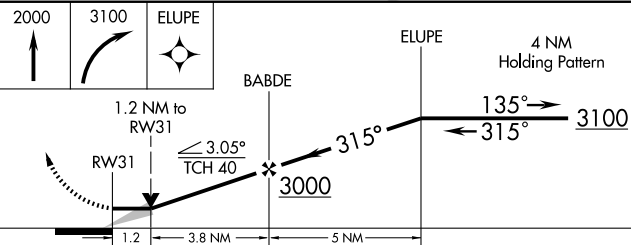
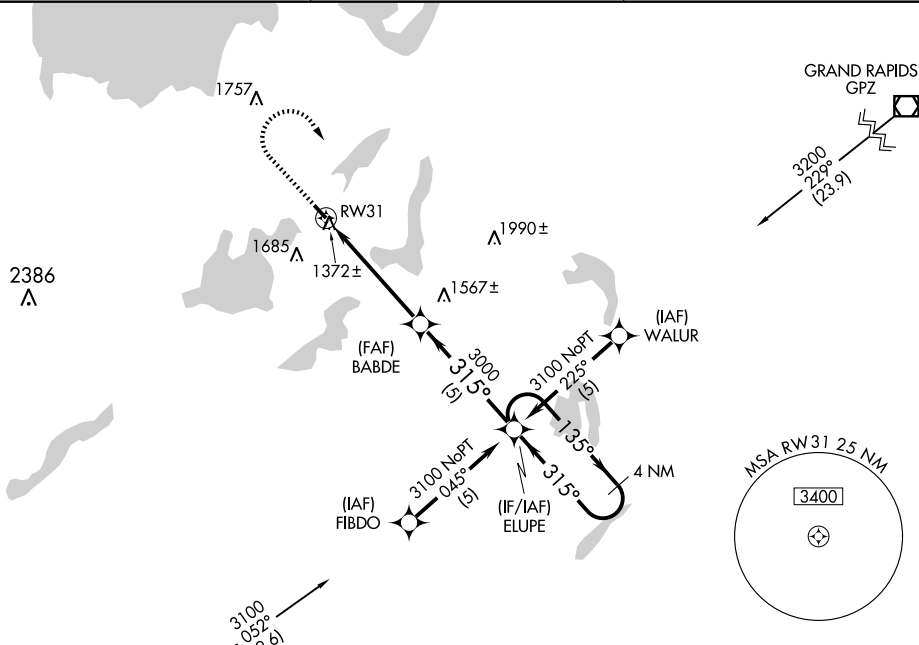
RNAV (GPS) RWY 31
LONGVILLE MUNI (XVG)

NA GPS or RNP-0.3 required. DME/DME RNP-0.3 NA MISSED APPROACH: Climb to 2000 then climbing right turn to 3100 direct ELUPE WP and hold.

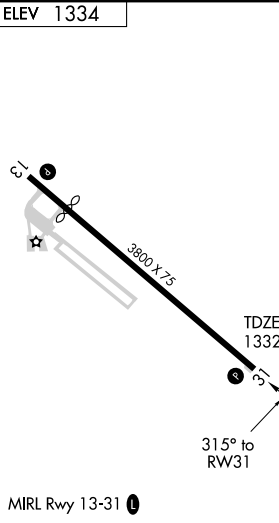
AWOS-3
392

MINNEAPOLIS CENTER
118.05 239.0

CTAF
122.9



CATEGORY	A	B	C	D
LNAV MDA	1760-1	428 (500-1)	NA	NA
CIRCLING	1860-1	526 (600-1)	NA	NA



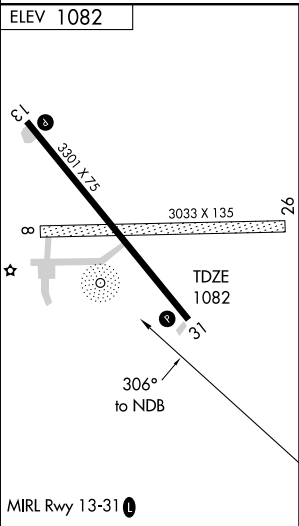
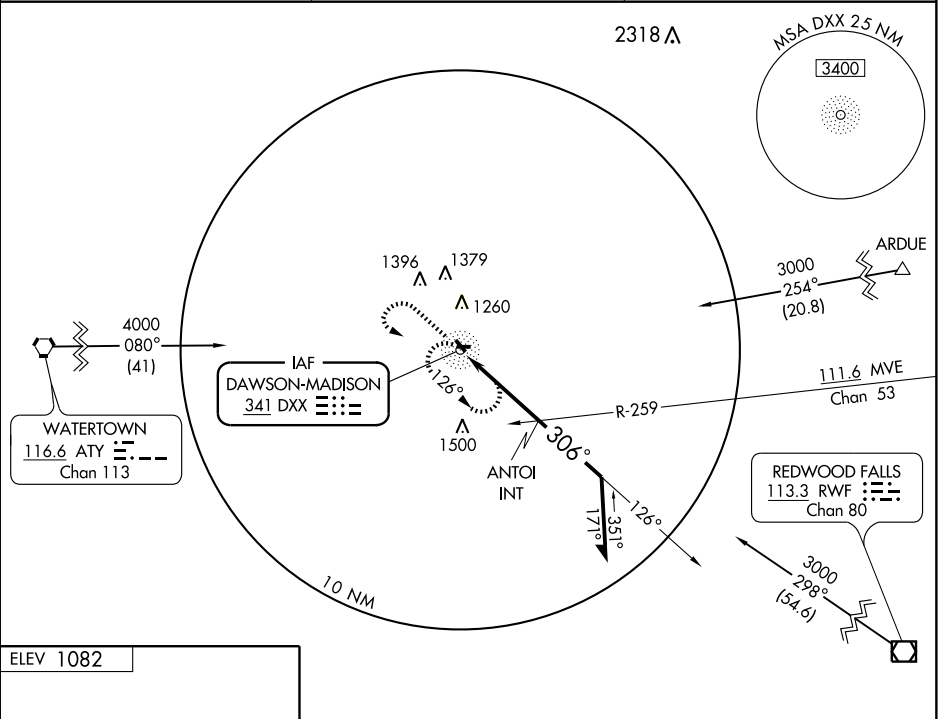
NDB DXX	APP CRS	Rwy Idg	3301
341	306°	TDZE	1082
		Apt Elev	1082

NDB or GPS RWY 31

MADISON/LAC QUI PARLE COUNTY (DXX)

NA	Activate MIRL Rwy 13-31-CTAF.	MISSED APPROACH: Climb to 2200 then climbing left turn to 2600 direct DXX NDB and hold.
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AWOS-3 341	MINNEAPOLIS CENTER 128.5 306.2	UNICOM 122.8 (CTAF) 0
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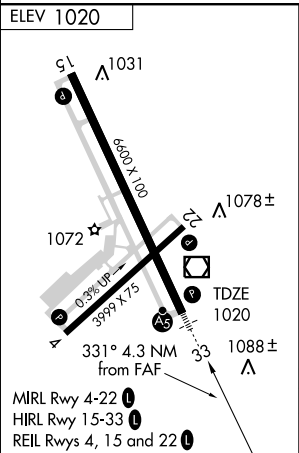
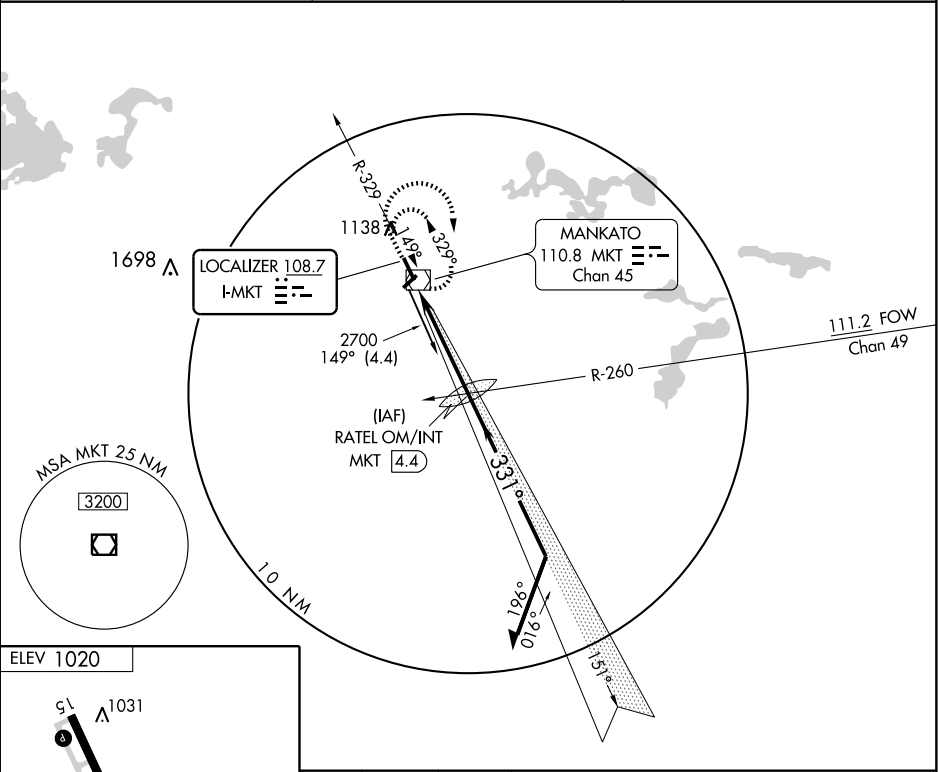
2200	2600	DXX 341	NDB	Remain within 10 NM
			126°	
			306°	2600
			1620	
			3.8 NM	
CATEGORY	A	B	C	D
S-31	1620-1	538 (600-1)	1620-1½ 538 (600-1½)	NA
CIRCLING	1620-1	538 (600-1)	1620-1½ 538 (600-1½)	NA
ANTOI FIX MINIMA				
S-31	1500-1	418 (500-1)	1500-1¼ 418 (500-1¼)	NA
CIRCLING	1560-1	478 (500-1)	1560-1½ 478 (500-1½)	NA

LOC I-MKT 108.7	APP CRS 331°	Rwy Idg TDZE Apt Elev 6600 1020 1020
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COPTER ILS or LOC RWY 33
MANKATO RGNL (MKT)

▼ For inoperative MALS increase visibility to ½ mile.	MALS 	MISSED APPROACH: Climb to 2000 then climbing right turn to 2700 direct MKT VOR/DME and hold.
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AWOS-3 110.8	MINNEAPOLIS CENTER 135.0 306.9	UNICOM 122.725 (CTAF)
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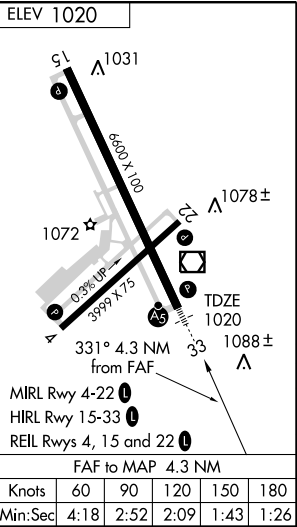
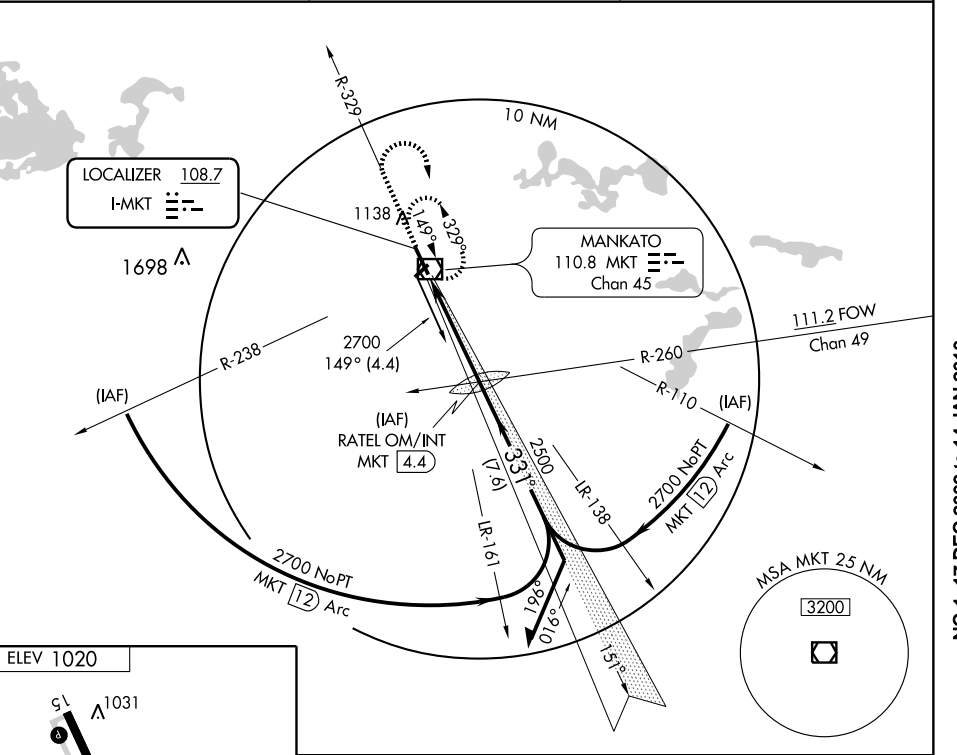
FAF to MAP 4.3 NM					
Knots	45	60	75	90	105
Min:Sec	5:44	4:18	3:26	2:52	2:27

 2000		 2700		 MKT 110.8		RATE OM/INT MKT <u>4.4</u>		Remain within 10 NM		
 2441		 2700		 2500		GS 3.00° TCH 45		4.3 NM		
CATEGORY	COPTER		B		C		D			
S-ILS 33	1220-¼ 200 (200-¼)				NA					
S-LOC 33	1420-¼ 400 (400-¼)				NA					
CIRCLING		NA								

MALSR

MISSED APPROACH: Climb to 2000 then climbing right turn to 2700 direct MKT VOR/DME and hold.

AWOS-3 110.8	MINNEAPOLIS CENTER 135.0 306.9	UNICOM 122.725 (CTAF) 0
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	2000	2700	MKT	RATEL OM/INT MKT 4.4	Remain within 10 NM
				110.8	
				2441	151°
					331°
					2500
					GS 3.00°
					TCH 45
					4.3 NM
CATEGORY	A	B	C	D	
S-ILS 33	1220-½ 200 (200-½)				
S-LOC 33	1420-½ 400 (400-½)			1420-¾ 400 (400-¾)	
CIRCLING	1460-1 440 (500-1)	1480-1 460 (500-1)	1480-1½ 460 (500-1½)	1580-2 560 (600-2)	

RNAV (GPS) RWY 4
MANKATO RGNL (MKT)

MISSED APPROACH: Climbing left turn to 2700 direct KABGE and hold.

UNICOM
122.725 (CTAF) **L**

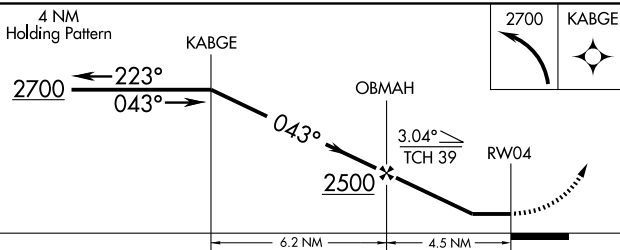


Diagram illustrating the TDZE (Threshold Crossing Height) area for Runway 04. The diagram shows the runway layout, including Runway 04 (1018) and Runway 04-22 (1088). Key elevation points and dimensions are marked:

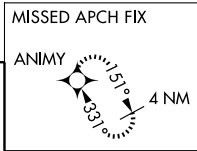
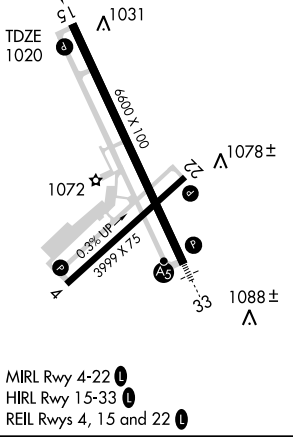
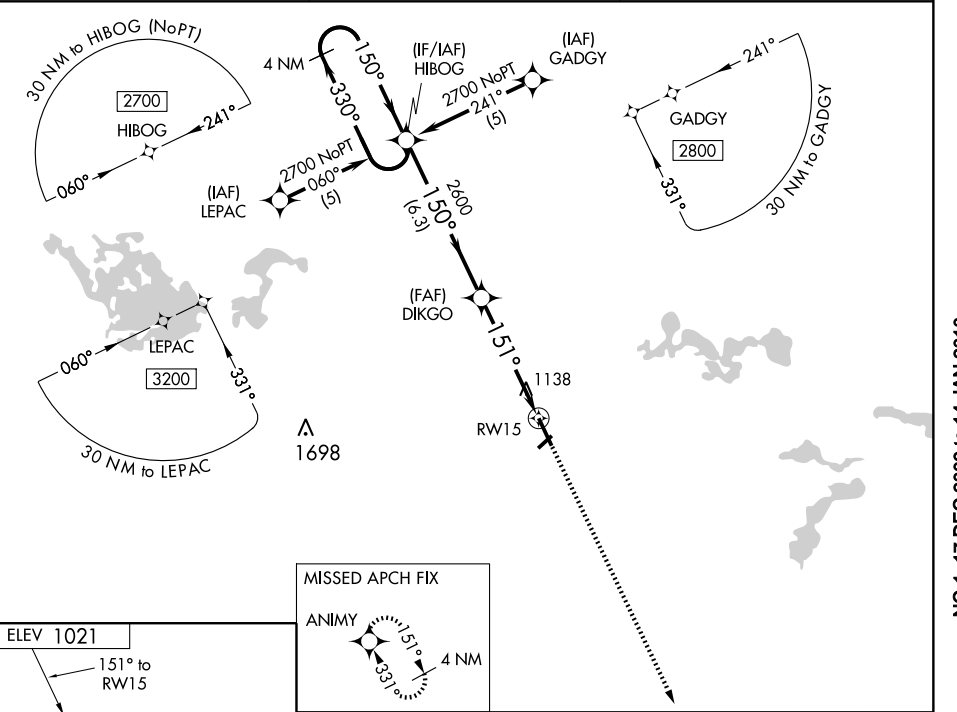
- ELEV 1021 (at the top left corner)
- MIRL Rwy 4-22 (at the top right corner)
- HIRL Rwy 15-33 (at the top right corner)
- REIL Rws 4, 15 and 22 (at the top right corner)
- Runway 04 (1018) dimensions: 3999 X 75
- Runway 04-22 (1088) dimensions: 6600 X 100
- Runway 04-22 (1088) dimensions: 22
- Runway 04-22 (1088) dimensions: 33
- Runway 04-22 (1088) dimensions: 1078 ±
- Runway 04-22 (1088) dimensions: 1088 ±
- Runway 04-22 (1088) dimensions: 0.3% UP
- Runway 04-22 (1088) dimensions: 043° to RW04
- Runway 04-22 (1088) dimensions: TDZE 1018
- Runway 04-22 (1088) dimensions: 1072
- Runway 04-22 (1088) dimensions: 1031
- Runway 04-22 (1088) dimensions: 1078 ±
- Runway 04-22 (1088) dimensions: 1088 ±

WAAS	APP CRS	Rwy Idg	6600
CH 45615	151°	TDZE	1020
W15A		Apt Elev	1021

Baro-VNAV NA when using Waseca altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received use Waseca altimeter setting and increase all DA 57 feet and all MDA 60 feet and increase LPV all Cats visibility ¼ mile, and LNAV Cats C/D visibility ¼ mile.

MISSED APPROACH:
Climb to 2900 direct ANIMY and hold.

AWOS-3 110.8	MINNEAPOLIS CENTER 135.0 306.9	UNICOM 122.725 (CTAF) 0
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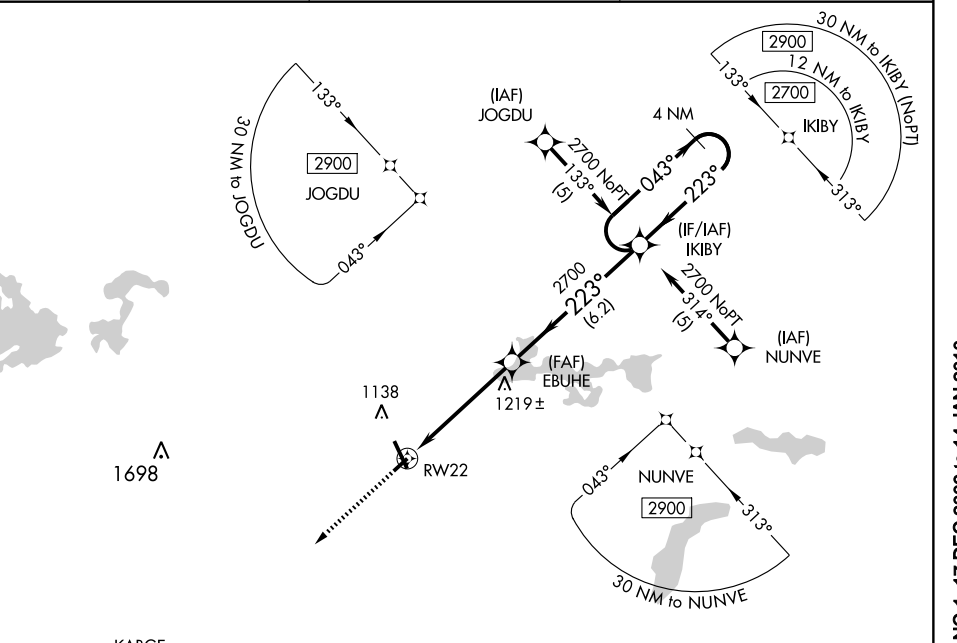
4 NM Holding Pattern		HIBOG		2900	ANIMY
2700		330°	150°	2600	
GS 3.00°		DIKGO		RW15	
TCH 48		151°		-6.3 NM	
				-4.8 NM	
CATEGORY	A	B	C	D	
LPV DA	1373-1¼		353 (400-1¼)		
LNAV/VNAV DA	1416-1½		396 (400-1½)		
LNAV MDA	1400-1		380 (400-1)		1400-1¼ 380 (400-1¼)
CIRCLING	1440-1		1480-1		1580-2
	419 (500-1)		459 (500-1)		559 (600-2)

NC-1. 17 DEC 2009 to 14 JAN 2010

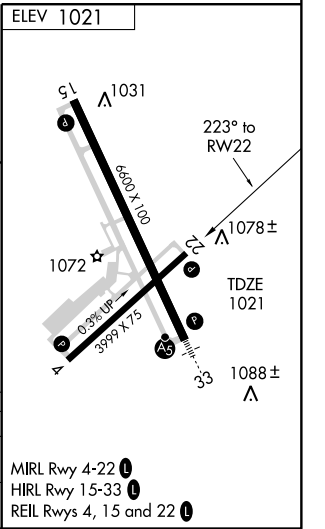
DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.
When local altimeter setting not received use Waseca altimeter setting and increase all MDA 60 feet and increase LNAV Cat C visibility ¼ mile.

MISSED APPROACH: Climb to 2700 direct KABGE and hold.

AWOS-3 110.8	MINNEAPOLIS CENTER 135.0 306.9	UNICOM 122.725 (CTAF) 0
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2700	KABGE	EBUHE	IKIBY	4 NM Holding Pattern
RWY 22		2700	223°	043°
			223°	2700
				VGSI and descent angles not coincident.
		5.1 NM	6.2 NM	
CATEGORY	A	B	C	D
LNAV MDA	1480-1	459 (500-1)	1480-1¼ 459 (500-1¼)	NA
CIRCLING	1480-1	459 (500-1)	1480-1½ 459 (500-1½)	NA



MIRL Rwy 4-22 0

HIRL Rwy 15-33 0

REIL Rws 4, 15 and 22 0

WAAS
CH **86315**
W33A

APP CRS
331°

Rwy Idg **6600**
TDZE **1021**
Apt Elev **1021**

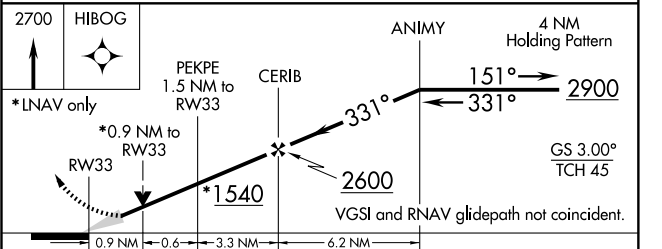
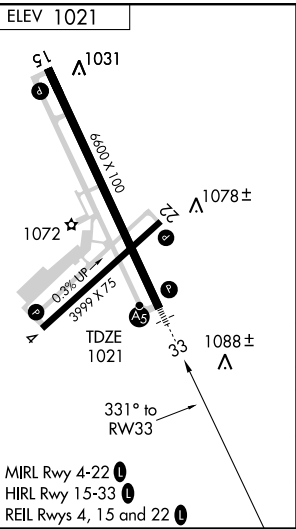
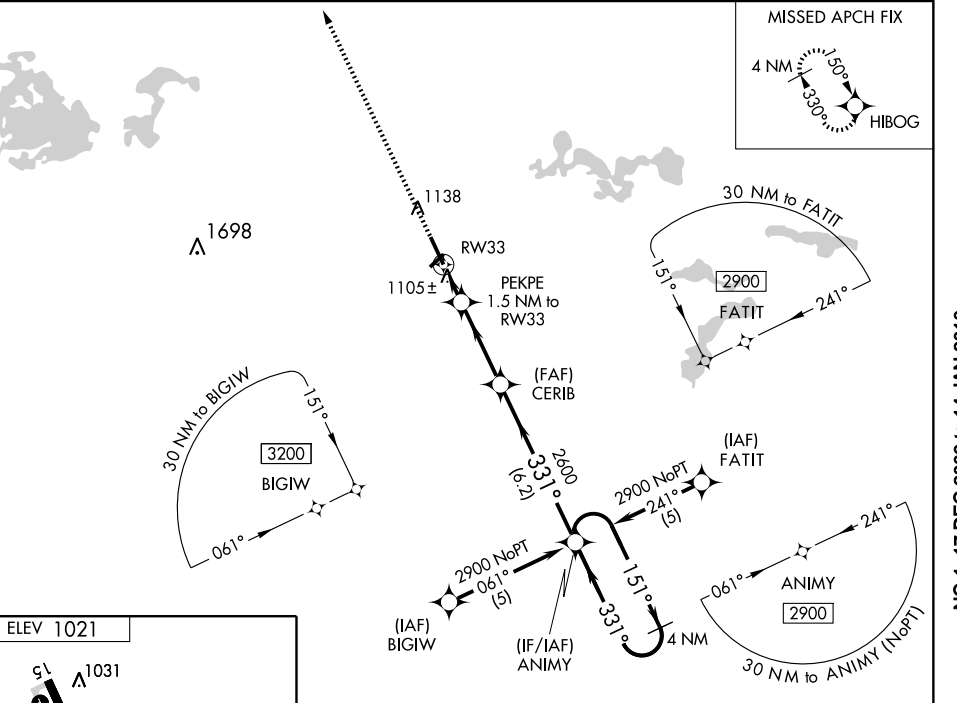
MANKATO RGNL (MKT)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). DME/DME RNP-0.3 NA. When local altimeter setting not received use Waseca altimeter setting and increase all DA 57 feet, all MDA 60 feet, and increase LNAV/VNAV all Cats visibility ¼ mile. Inoperative table does not apply to LNAV Cat D. When using Waseca altimeter setting; for inoperative MALSR increase LPV all Cats visibility ½ mile and LNAV Cat D visibility ¼ mile. Baro-VNAV and VDP NA when using Waseca altimeter setting.

MALSR
A5

MISSED APPROACH:
Climb to 2700 direct
HIBOG and hold.

AWOS-3 110.8	MINNEAPOLIS CENTER 135.0 306.9	UNICOM 122.725 (CTAF) 0
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CATEGORY	A	B	C	D
LPV DA	1221-1/2	200 (200-1/2)		
LNAV/VNAV DA	1375-3/4	354 (400-3/4)		
LNAV MDA	1360-1/2	339 (400-1/2)		1360-1 339 (400-1)
CIRCLING	1440-1 419 (500-1)	1480-1 459 (500-1)	1480-1 1/2 459 (500-1 1/2)	1580-2 559 (600-2)

VOR/DME MKT 110.8 Chan 45	APP CRS 139°	Rwy Idg 6600 TDZE 1020 Apt Elev 1021
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VOR RWY 15
MANKATO RGNL (MKT)

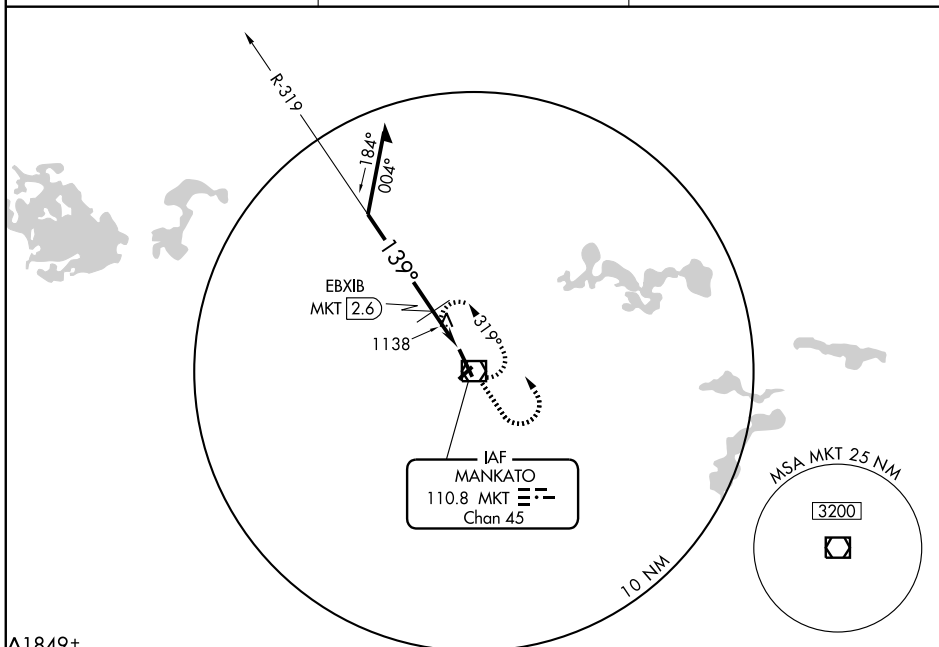
T When local altimeter setting not received use Waseca altimeter setting
A and increase EBXIB FIX MINIMUMS all MDA 60 feet, increase Circling
 Cats C and D visibility $\frac{1}{4}$ mile, and increase EBXIB FIX MINIMUMS S-15
 Cats C and D visibility $\frac{1}{4}$ mile.

MISSED APPROACH: Climb to 2000 then climbing left turn to 2700 direct MKT VOR/DME and hold.

AWOS-3
110.8

MINNEAPOLIS CENTER
135.0 306.9

UNICOM
122.725 (CTAF) **L**

 $1849 \pm$

Remain
within 10 NM

VOR/DME

2000

2700

MKT

2700

EBXIB
MKT 2.6

1600

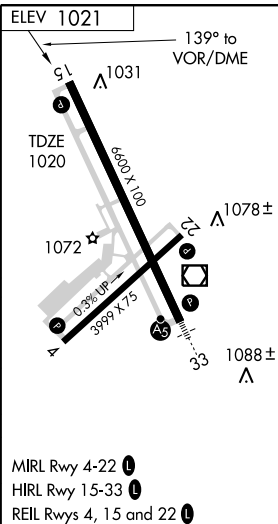
$$3.06^\circ$$

A horizontal line with a segment of length 1.6 and a shaded segment of length 1.0.

CATEGORY	A	B	C	D
S-15	1600-1	580 (600-1)	1600-1½ 580 (600-1½)	1600-1¾ 580 (600-1¾)
CIRCLING	1600-1	579 (600-1)	1600-1½ 579 (600-1½)	1600-2 579 (600-2)

EBXIB	FIX	MINIMUMS
1	2	3
4	5	6
7	8	9
10	11	12
13	14	15
16	17	18
19	20	21
22	23	24
25	26	27
28	29	30
31	32	33
34	35	36
37	38	39
40	41	42
43	44	45
46	47	48
49	50	51
52	53	54
55	56	57
58	59	60
61	62	63
64	65	66
67	68	69
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187	188	189
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196	197	198
199	200	201
202	203	204
205	206	207
208	209	210
211	212	213
214	215	216
217	218	219
220	221	222
223	224	225
226	227	228
229	230	231
232	233	234
235	236	237
238	239	240
241	242	243
244	245	246
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250	251	252
253	254	255
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259	260	261
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265	266	267
268	269	270
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274	275	276
277	278	279
280	281	282
283	284	285
286	287	288
289	290	291
292	293	294
295	296	297
298	299	300
301	302	303
304	305	306
307	308	309
310	311	312
313	314	315
316	317	318
319	320	321
322	323	324
325	326	327
328	329	330
331	332	333
334	335	336
337	338	339
340	341	342
343	344	345
346	347	348
349	350	351
352	353	354
355	356	357
358	359	360
361	362	363
364	365	366
367		

S-15	1400-1 380 (400-1)			1400-1¼ 380 (400-1¼)
CIRCLING	1440-1 419 (500-1)	1480-1 459 (500-1)	1480-1½ 459 (500-1½)	1580-2 559 (600-2)

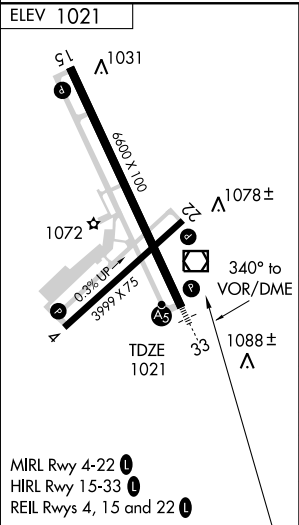
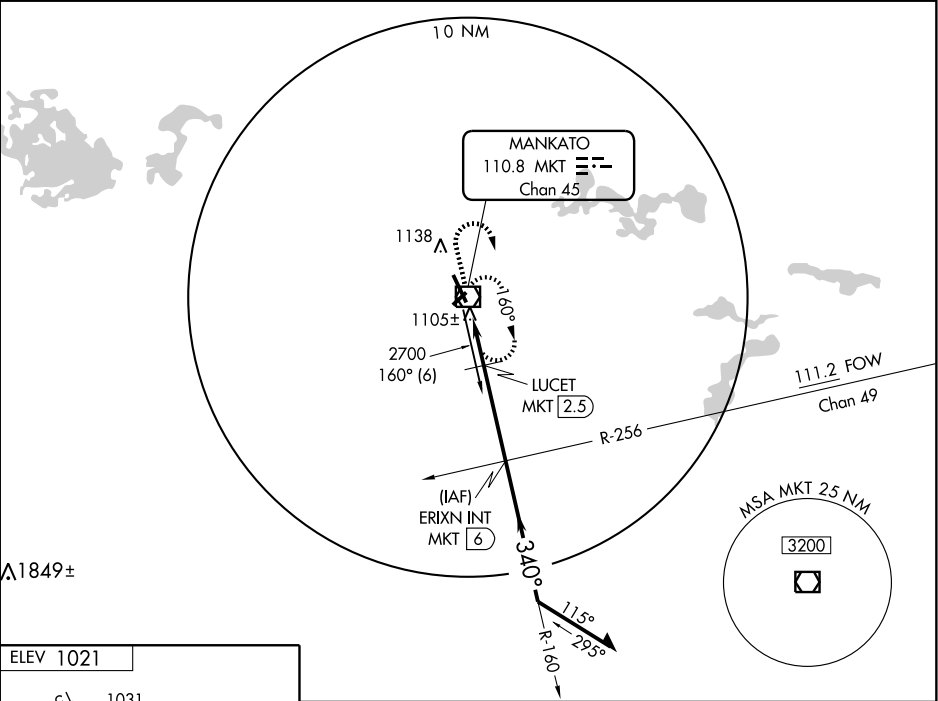


▼ VDP NA when using Waseca altimeter setting. When local altimeter setting not received use Waseca altimeter setting and increase all MDA 60 feet, and increase S-33 Cats C and D visibility ¼ mile and LUCET FIX MINIMUMS S-33 Cat C ¼ mile. For inoperative MALSRL increase LUCET FIX MINIMUMS Cat D visibility ¼ mile.

MALSRL

MISSED APPROACH: Climb to 2300 then climbing right turn to 2700 direct MKT VOR/DME and hold.

AWOS-3 110.8	MINNEAPOLIS CENTER 135.0 306.9	UNICOM 122.725 (CTAF) 1
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2300	2700	MKT 110.8	ERIXN INT MKT 6	Remain within 10 NM
VOR/DME		LUCET MKT 1.2	LUCET MKT 2.5	
1520		2600	2700	* 1580 when using Waseca altimeter setting.
1.0		1.3	3.5 NM	
CATEGORY	A	B	C	D
S-33	1520-½	499 (500-½)	1520-¾ 499 (500-¾)	1520-1 499 (500-1)
CIRCLING	1520-1	499 (500-1)	1520-1½ 499 (500-1½)	1580-2 559 (600-2)
LUCET FIX MINIMUMS				
S-33	1400-½	379 (400-½)	1400-1	379 (400-1)
CIRCLING	1440-1 419 (500-1)	1480-1 459 (500-1)	1480-1½ 459 (500-1½)	1580-2 559 (600-2)

AGUDE ONE ARRIVAL

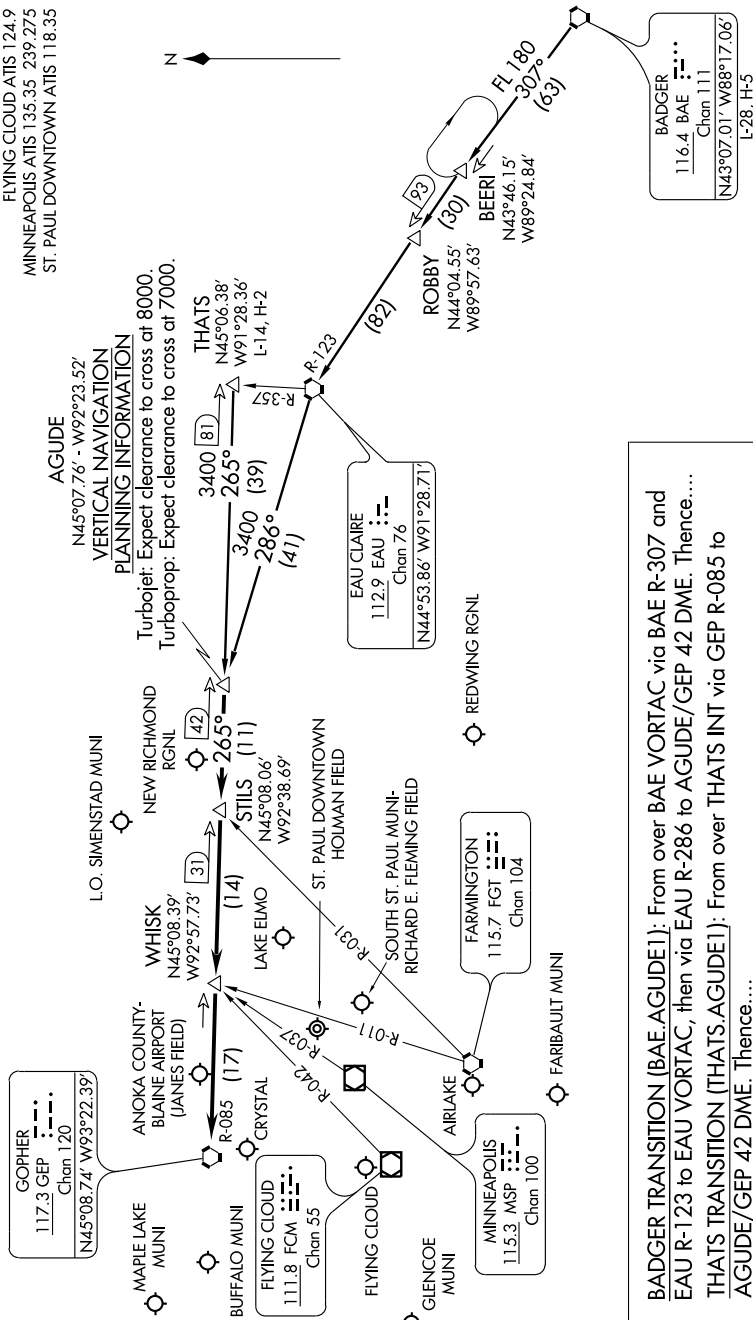
ST-263 (FAA)

MINNEAPOLIS-ST. PAUL, MINNESOTA

MINNEAPOLIS APP CON
126.95 335.5
ANOKA COUNTY ATIS 120.625
CRYSTAL ATIS 124.475
FLYING CLOUD ATIS 124.9
MINNEAPOLIS ATIS 135.35 239.275
ST. PAUL DOWNTOWN ATIS 118.35

AGUDE
N45°07.76' - W92°23.52'
VERTICAL NAVIGATION
PLANNING INFORMATION

Turbopjet: Expect clearance to cross at 8000.
Turboprop: Expect clearance to cross at 7000.



BADGER TRANSITION (BAE AGUDE1): From over BAE VORTAC via BAE R-307 and EAU R-123 to EAU VORTAC, then via EAU R-286 to AGUDE/GEF 42 DME. Thence....
THATS TRANSITION (THATS.AGUDE1): From over THATS INT via GEP R-085 to AGUDE/GEF 42 DME. Thence....
....From over AGUDE/GEF 42 DME via the GEP R-085 to GEP VORTAC, then expect radar vector to final approach course.

NOTE: DME and RADAR required.
NOTE: Chart not to scale.

AIRPORT DIAGRAM

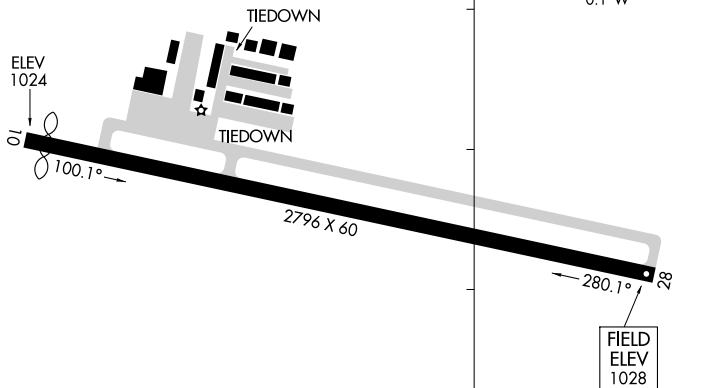
AL-6585 (FAA)

MAPLE LAKE MUNI (MGG)
MAPLE LAKE, MINNESOTA

AWOS-3
128.325
CTAF/UNICOM
122.8

45°14.5'N

1063±
Δ



CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

093°59.5'W

093°59'W

NC-1, 17 DEC 2009 to 14 JAN 2010

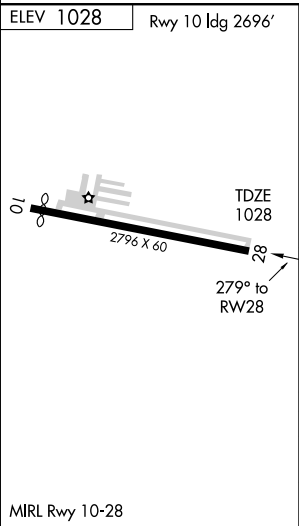
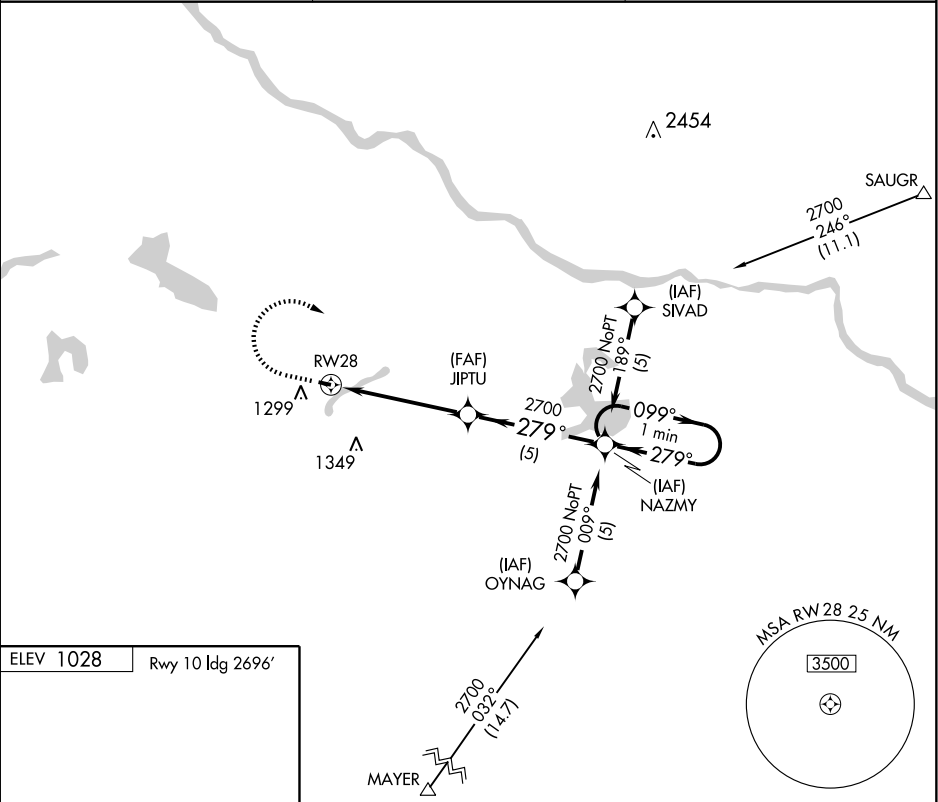
GPS RWY 28

MAPLE LAKE MUNI (MGG)

APP CRS	Rwy Idg	2796
279°	TDZE	1028
	Apt Elev	1028

▲ NA	MISSED APPROACH: Climb to 2000 then climbing right turn to 2700 direct NAZMY WP and hold.
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AWOS-3 128.325	MINNEAPOLIS APP CON 126.5 357.4	UNICOM 122.8 (CTAF)
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	2000	2700	NAZMY	JIPTU	NAZMY	One Minute Holding Pattern
	↑	↶	✧			
		1.2 NM to RWY 28				
		↶				
		3.07° TCH 40				
		1.2 NM	3.8 NM	5 NM		
CATEGORY	A	B	C	D		
S-28	1460-1 432 (500-1)		1460-1 ¼ 432 (500-1 ¼)	NA		
CIRCLING	1600-1 572 (600-1)		1600-1 ½ 572 (600-1 ½)	NA		

VORTAC DWN 109.0 Chgn 27	APP CRS 239°	Rwy Idg N/A TDZE N/A Apt Elev 1028
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VOR-A
MAPLE LAKE MUNI (MGG)

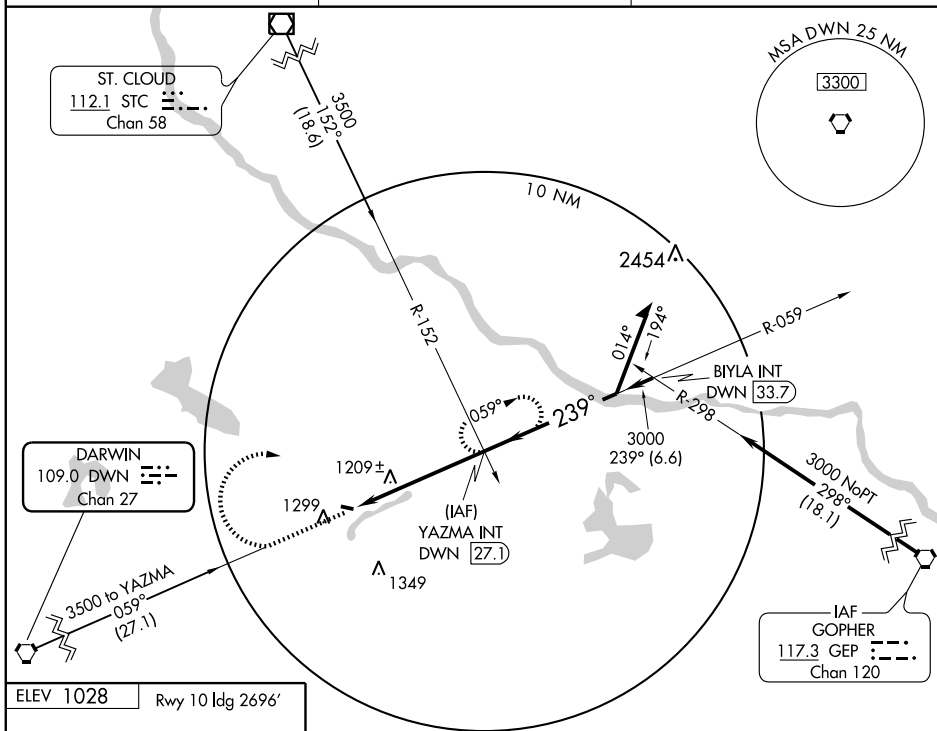
A If local altimeter setting not received, use St. Cloud Regional altimeter setting and increase all MDAs 60 feet.

MISSED APPROACH: Climb to 2000, then climbing right turn to 3500 via DWN R-059 to YAZMA INT/27.1 DME and hold.

AWOS-3
128,325

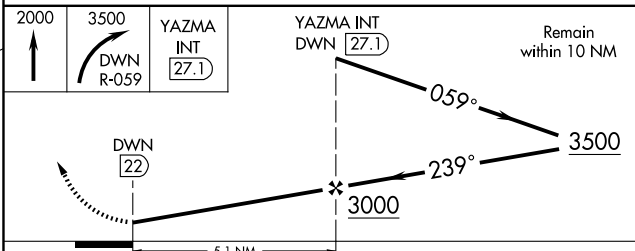
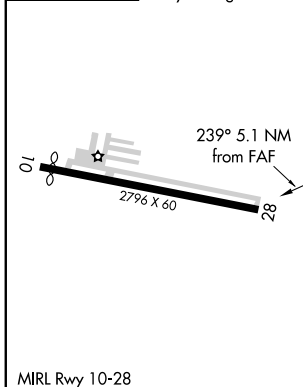
MINNEAPOLIS APP CON
126.5 357.4

UNICOM
122.8 (CTAF)



NC-1. 17 DEC 2009 to 14 JAN 2010

ELEV 1028	Rwy 10 ldg 2696'
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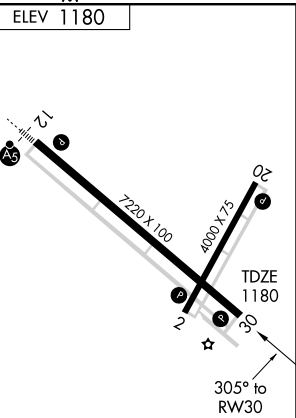
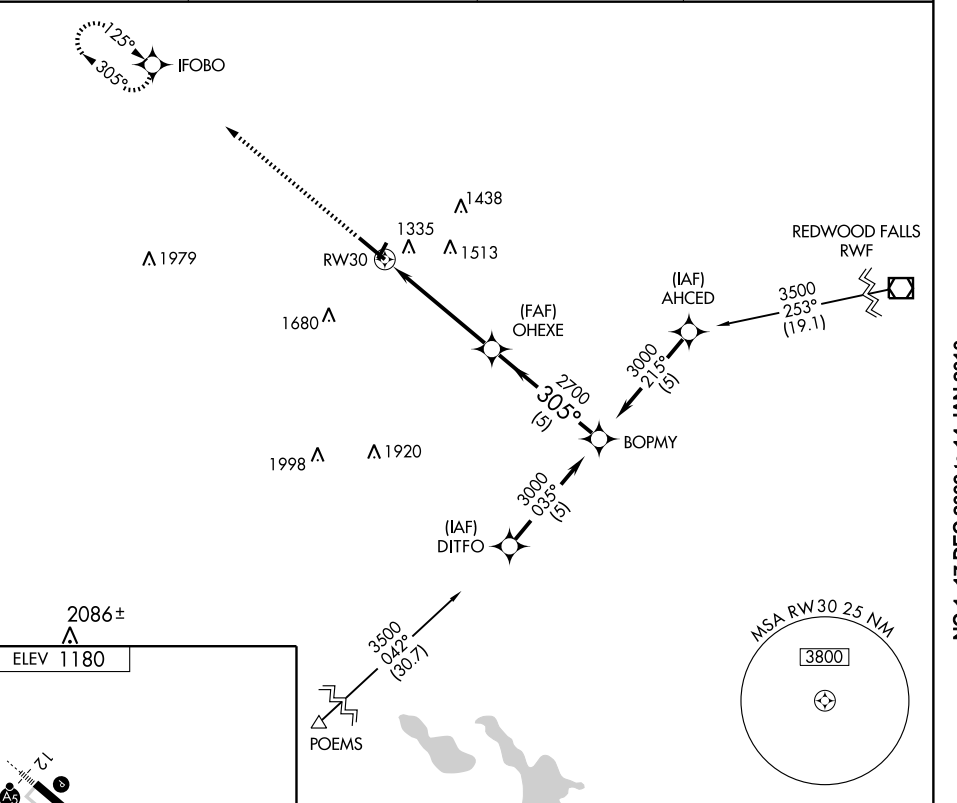
FAF to MAP 5.1 NM							5.1 NM			
Knots	60	90	120	150	180	CATEGORY	A	B	C	D
Min:Sec	5:06	3:24	2:33	2:02	1:42	CIRCLING	1660-1 632 (700-1)	1660-1¼ 632 (700-1¼)	1660-1¾ 632 (700-1¾)	NA

▽

NA

MISSED APPROACH: Climb to 3000 direct IFOBO WP and hold.

AWOS-3 111.0	MINNEAPOLIS CENTER 127.1 290.2	GCO 121.725	UNICOM 122.8 (CTAF) 0
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HIRL Rwy 12-30 0
REIL Rws 2-20 and 30 0
MRL Rwy 2-20 0

<div><div>3000</div><div>↑</div><div>IFOBO</div></div>				
<div><div><div>RW30</div><div>OHEXE</div><div>BOPMY</div></div><div><div>2700</div><div>3000</div></div><div><div>305°</div><div>2.81°</div><div>TCH 32</div></div><div><div>5 NM</div><div>5 NM</div></div><div>Procedure Turn NA</div></div>				
CATEGORY	A	B	C	D
S-30	1580-1 400 (400-1)			1580-1 ¼ 400 (400-1 ¼)
CIRCLING	1640-1 460 (500-1)		1640-1 ½ 460 (500-1 ½)	1740-2 560 (600-2)

LOC I-GBY	APP CRS	Rwy Idg
109.7	125°	7220
		1182
		Apt Elev
		1182

MARSHALL/
SOUTHWEST MINNESOTA RGNL MARSHALL/RYAN FIELD (MML)

ILS or LOC RWY 12

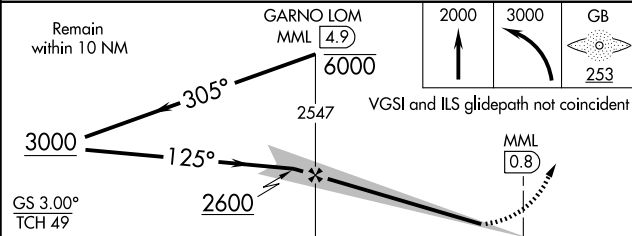
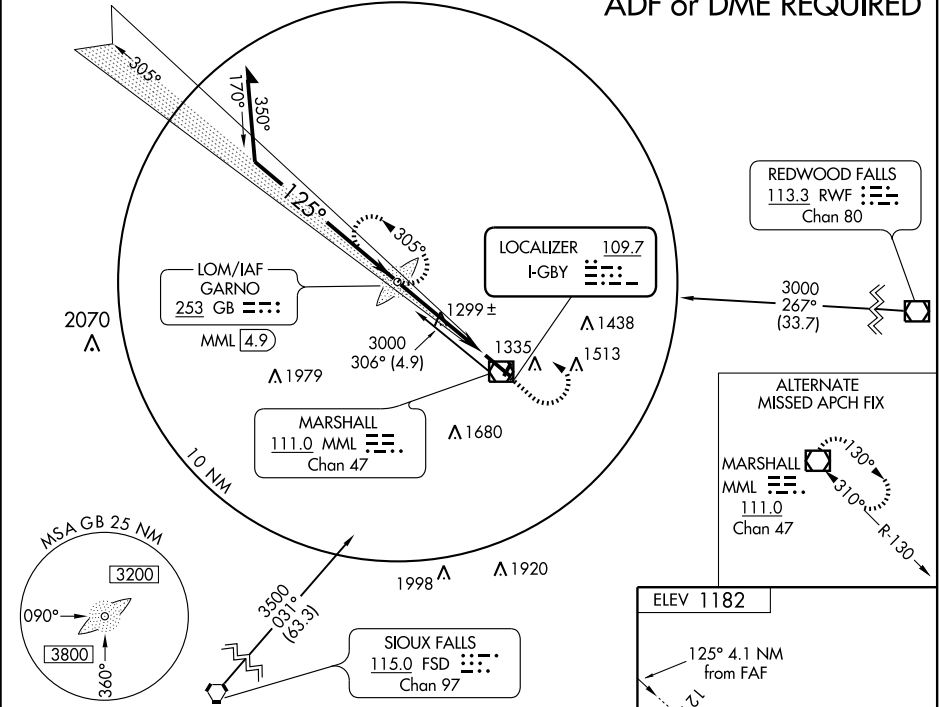
ADF required.
When local altimeter setting not received, use Tracy Muni altimeter setting and increase all DAs/MDAs 60 feet and S-LOC 12 Cats C/D visibility ¼ mile. For inoperative MALSRS when using Tracy Muni altimeter setting, increase S-ILS 12 visibility to 1 mile all Cats.



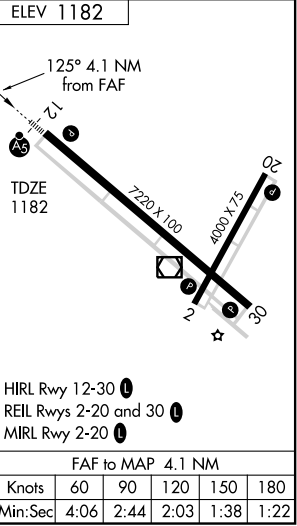
MISSED APPROACH: Climb to 2000 then climbing left turn to 3000 direct GARNO LOM/MML 4.9 DME and hold.

AWOS-3 111.0	MINNEAPOLIS CENTER 127.1 290.2	GCO 121.725	UNICOM 122.8 (CTAF)
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ADF or DME REQUIRED



CATEGORY	A	B	C	D
S-ILS 12		1382-½	200 (200-½)	
S-LOC 12		1560-½	378 (400-½)	1560-¾ 378 (400-¾)
CIRCLING	1640-1	458 (500-1)	1640-½ 458 (500-½)	1740-2 558 (600-2)



WAAS CH 82106 W12A	APP CRS 125°	Rwy Idg 7220 TDZE 1182 Apt Elev 1182
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MARSHALL/
SOUTHWEST MINNESOTA RGNL MARSHALL/RYAN FIELD (MML)

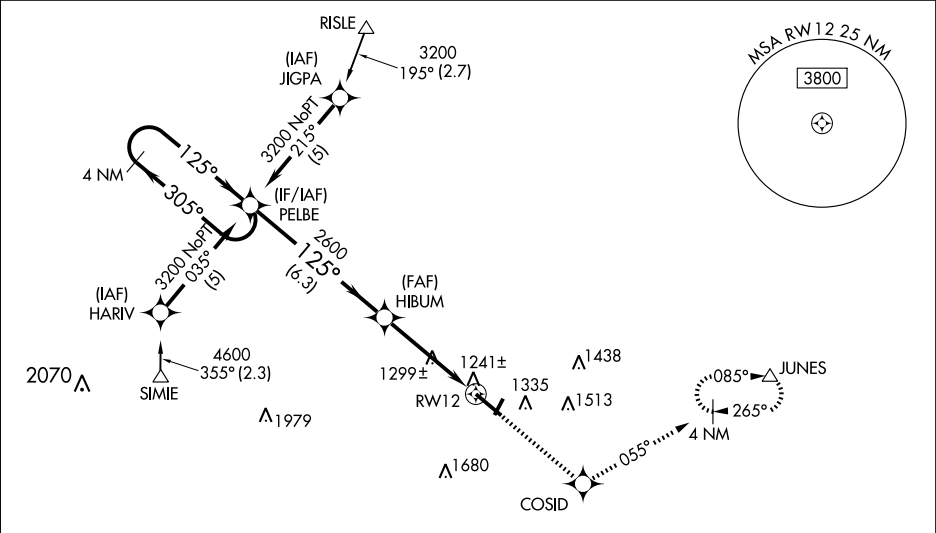
RNAV (GPS) RWY 12


T DME/DME RNP-0.3 NA.
A When local altimeter setting not received, use Tracy Muni altimeter setting and increase all DAs/MDAs 60 feet and LNAV Cat. C visibility ¼ mile.
W VDP and Baro-VNAV NA when using Tracy Muni altimeter setting.
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F).
For inoperative MALSR when using Tracy Muni altimeter setting, increase LPV visibility to 1 mile all Cats.
For inoperative MALSR, increase LNAV Cat. D visibility to 1 ½ mile.

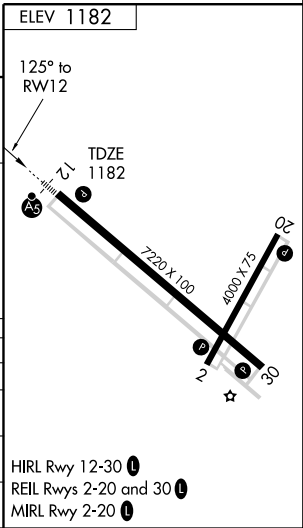


MISSED APPROACH: Climb to 4600, direct COSID and via 055° track to JUNES and hold, continue climb-in-hold to 4600.

AWOS-3 111.0	MINNEAPOLIS CENTER 127.1 290.2	GCO 121.725	UNICOM 122.8 (CTAF) L
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4 NM Holding Pattern		VGSI and RNAV glidepath not coincident		4600 ↑	COSID 	055° track	JUNES △
		PELBE		* LNAV only			
3200 ← 305° 125° →		HIBUM		* 1.1 NM to RW12			
GS 3.00° TCH 49		2600		RW12			
		6.3 NM		3.1 NM		1.1 NM	
CATEGORY	A	B	C	D			
LPV DA	1432-½		250 (300-½)				
LNAV/ VNAV DA	1511-¾		329 (400-¾)				
LNAV MDA	1560-½		378 (400-½)		1560-1 378 (400-1)		
CIRCLING	1640-1 458 (500-1)		1640-1½ 458 (500-½)		1740-2 558 (600-2)		



HIRL Rwy 12-30 L
REIL Rws 2-20 and 30 L
MIRL Rwy 2-20 L

▼

▲NA

MISSED APPROACH: Climb to 2700, then right turn via MML VOR/DME R-118 to GUNNS/MML 5 DME and hold.

AWOS-3 111.0	MINNEAPOLIS CENTER 127.1 290.2	GCO 121.725	UNICOM 122.8 (CTAF) 1
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MSA MML 25 NM

090° 360° 3100 3800

Λ 1979

MARSHALL
111.0 MML **111.0**
Chan 47

Λ 1438

1335 Λ 1513

298°

1680 Λ 2700 118° (5)

118° 1 min 298°

(IAF) GUNNS MML **5**

1998 Λ 1920

10 NM

IAF REDWOOD FALLS
113.3 RWF **113.3**
Chan 80

2700 NoPT to GUNNS 242° (21.3) and 298° (7)

R-118

3500 03° (63.3)

SIoux FALLS
115.0 FSD **115.0**
Chan 97

2086±

2700

↑

MML R-118

298°

GUNNS MML **5**

VOR/DME

MML **0.5**

298°

3.03° TCH 32

4.5 NM

One Minute Holding Pattern

118° → 2700

← 298°

ELEV 1180

12

20

7220 X 100

4000 X 75

TDZE 1180

298° to VOR/DME

CATEGORY	A	B	C	D
S-30	1600-1 420 (500-1)		1600-1¼ 420 (500-1¼)	
CIRCLING	1640-1 460 (500-1)		1640-1½ 460 (500-1½)	1740-2 560 (600-2)

HIRL Rwy 12-30 **1**

REIL Rws 2-20 and 30 **1**

MIRL Rwy 2-20 **1**

NC-1. 17 DEC 2009 to 14 JAN 2010

VOR RWY 12

VOR/DME MML	APP CRS	Rwy Idg	7220
111.0	130°	TDZE	1182
Chan 47		Apt Elev	1182

MARSHALL/
SOUTHWEST MINNESOTA RGNL MARSHALL/RYAN FIELD (MML)

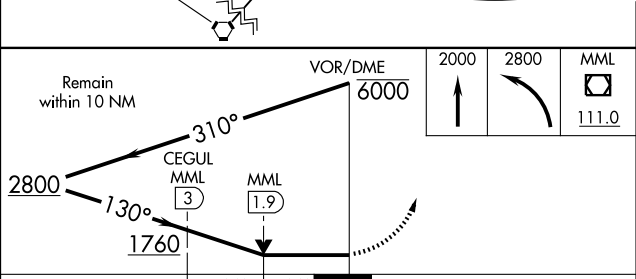
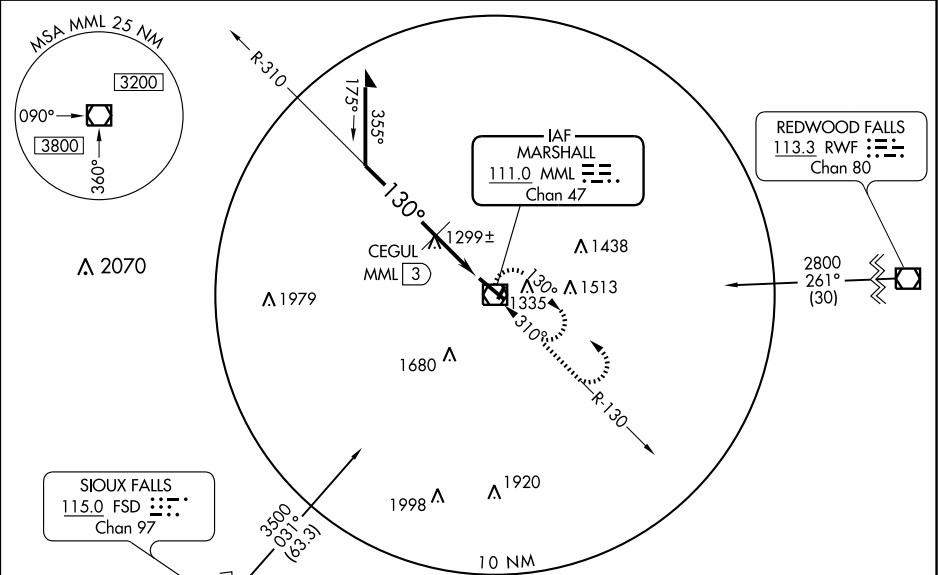
For inoperative MALS, increase CEGUL FIX MINIMUMS S-12 Cat. D visibility to 1 1/4 mile.
When local altimeter setting not received, use Tracy Muni altimeter setting and increase all MDAs 60 feet and S-12 Cat. C/D visibility 1/4 mile; increase Circling Cat. C visibility 1/4 mile. Increase CEGUL FIX MINIMUMS S-12 Cat. C visibility to 3/4 mile.
VDP NA when using Tracy Muni altimeter setting.

MALS

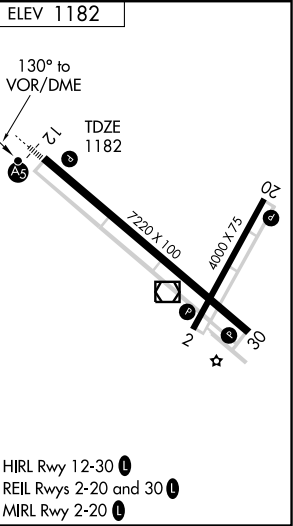


MISSED APPROACH: Climb to 2000, then climbing left turn to 2800 direct MML VOR/DME and hold.

AWOS-3	MINNEAPOLIS CENTER	GCO	UNICOM
111.0	127.1 290.2	121.725	122.8 (CTAF) 0



CATEGORY	A	B	C	D
S-12	1760-1/2 578 (600-1/2)		1760-1 578 (600-1)	1760-1 1/4 578 (600-1 1/4)
CIRCLING	1760-1 578 (600-1)		1760-1 1/2 578 (600-1 1/2)	1760-2 578 (600-2)
CEGUL FIX MINIMUMS				
S-12	1560-1/2 378 (400-1/2)		1560-1 378 (400-1)	
CIRCLING	1640-1 458 (500-1)		1640-1 1/2 458 (500-1 1/2)	1740-2 558 (600-2)



APP CRS	Rwy Idg	3400
139°	TDZE	1228
	Apt Elev	1228

RNAV (GPS) RWY 14

MC GREGOR/ISEDOR IVERSON (HZX)

<p>NA DME/DME RNP- 0.3 NA. If local altimeter setting not received, use Aitkin altimeter setting and increase all MDAs 40 feet. Procedure NA at night.</p>	
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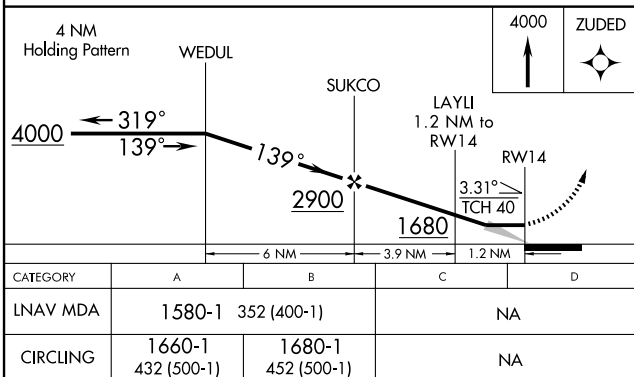
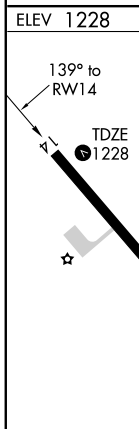
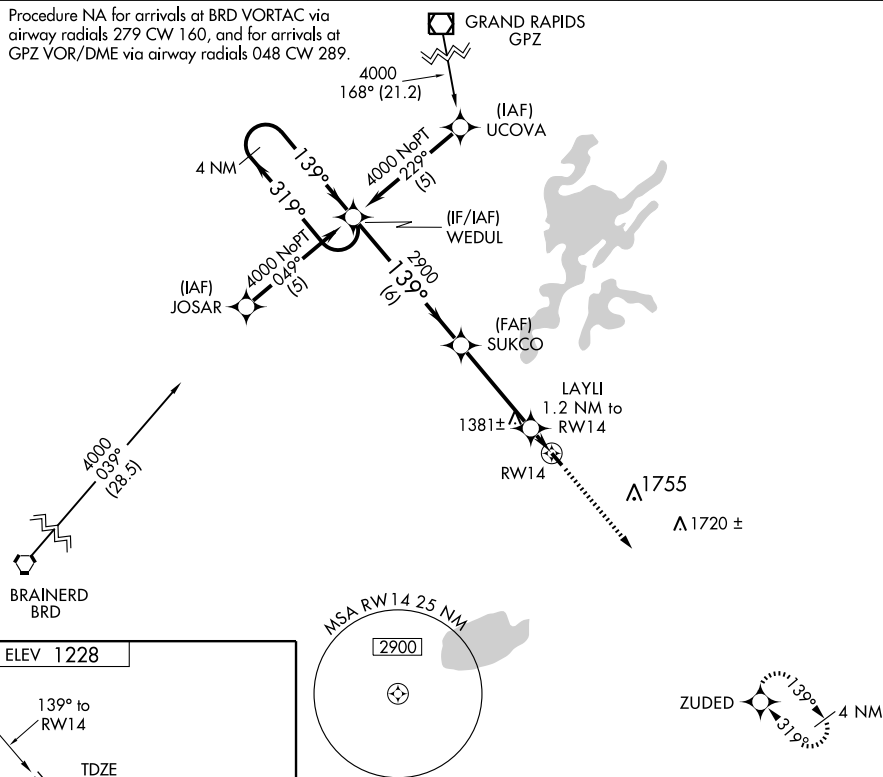
MISSED APPROACH: Climb to 4000 direct ZUDED and hold.

ASOS-3
119,575

MINNEAPOLIS CENTER
127.9 281.45

CTAF
122.9 L

Procedure NA for arrivals at BRD VORTAC via
airway radials 279 CW 160, and for arrivals at
GPZ VOR/DME via airway radials 048 CW 289.



APP CRS 319°	Rwy Idg TDZE Apt Elev	3400 1226 1228
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RNAV (GPS) RWY 32

MC GREGOR/ ISEDOR IVERSON (HZX)

A	NA	<p>DME/DME RNP- 0.3 NA.</p> <p>If local altimeter setting not received, use Aitkin altimeter setting and increase all MDAs 40 feet.</p> <p>Procedure NA at night.</p>
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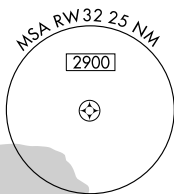
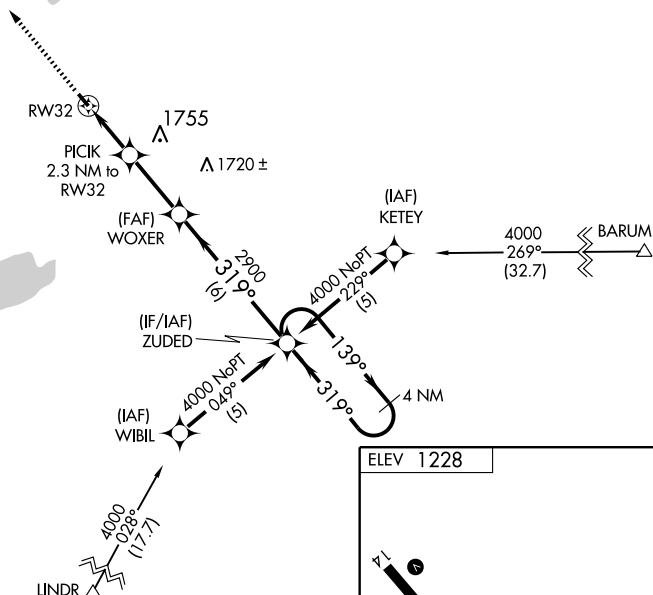
MISSED APPROACH: Climb to 4000 direct WEDUL and hold.

ASOS-3
119,575

MINNEAPOLIS CENTER
127.9 281.45

CTAF
122.9 L

Procedure NA for arrivals at LINDR via V218 southbound.



4000
↑
WEDUL

VDP NA with Airkin altimeter setting.

4 NM Holding Pattern

PICIK 2.3 NM to RW32

1 NM to RW32

3.04° TCH 40

WOXER

319°

139°

319°

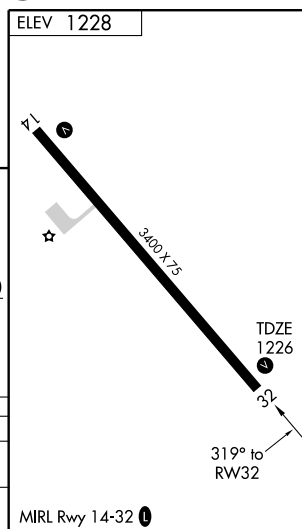
4000

2900

2000

1 NM 1.3 NM 2.8 NM 6 NM

CATEGORY	A	B	C	D
LNAV MDA	1600-1	374 (400-1)	NA	
CIRCLING	1660-1 432 (500-1)	1680-1 452 (500-1)	NA	



AGUDE ONE ARRIVAL

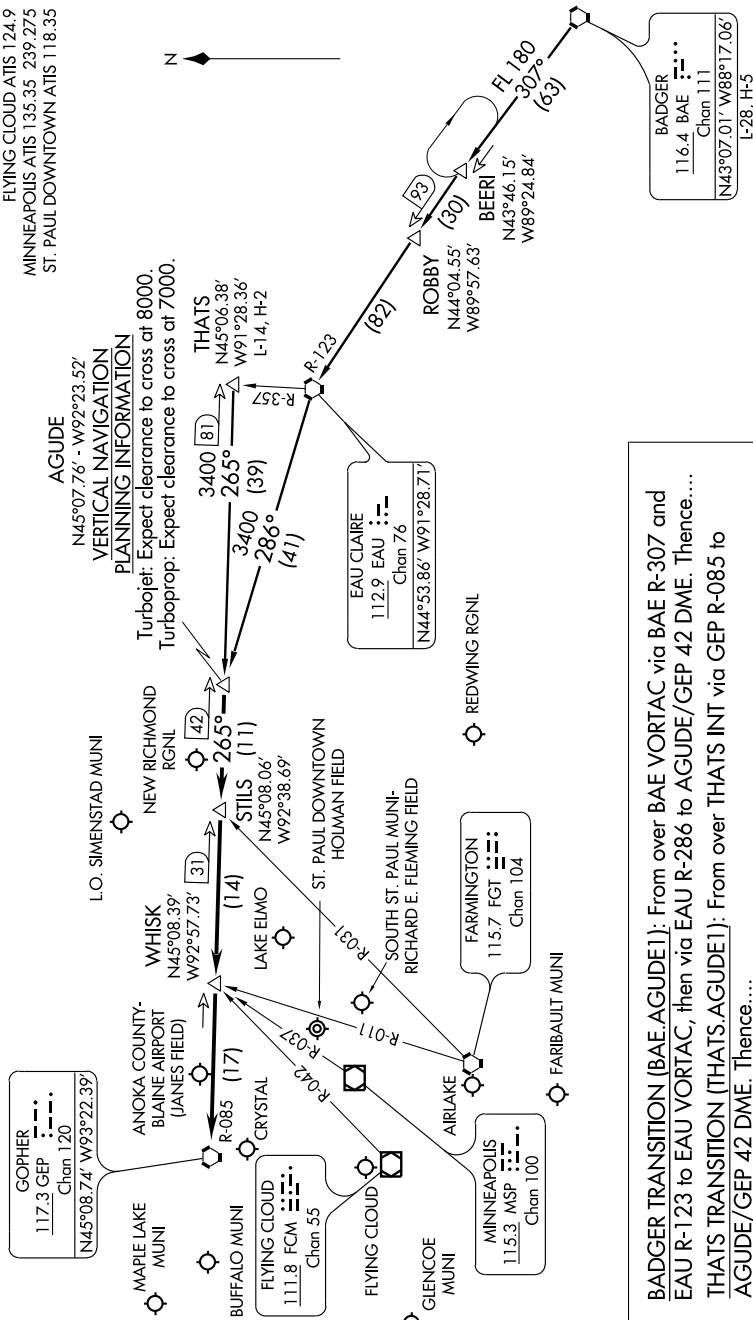
ST-263 (FAA)

MINNEAPOLIS-ST. PAUL, MINNESOTA

MINNEAPOLIS APP CON
126.95 335.5
ANOKA COUNTY ATIS 120.625
CRYSTAL ATIS 124.475
FLYING CLOUD ATIS 124.9
MINNEAPOLIS ATIS 135.35 239.275
ST. PAUL DOWNTOWN ATIS 118.35

AGUDE
N45°07.76' - W92°23.52'
VERTICAL NAVIGATION
PLANNING INFORMATION

Turbopjet: Expect clearance to cross at 8000.
Turboprop: Expect clearance to cross at 7000.



BADGER TRANSITION (BAE AGUDE1): From over BAE VORTAC via BAE R-307 and EAU R-123 to EAU VORTAC, then via EAU R-286 to AGUDE/GEF 42 DME. Thence....
THATS TRANSITION (THATS.AGUDE1): From over THATS INT via GEF R-085 to AGUDE/GEF 42 DME. Thence....

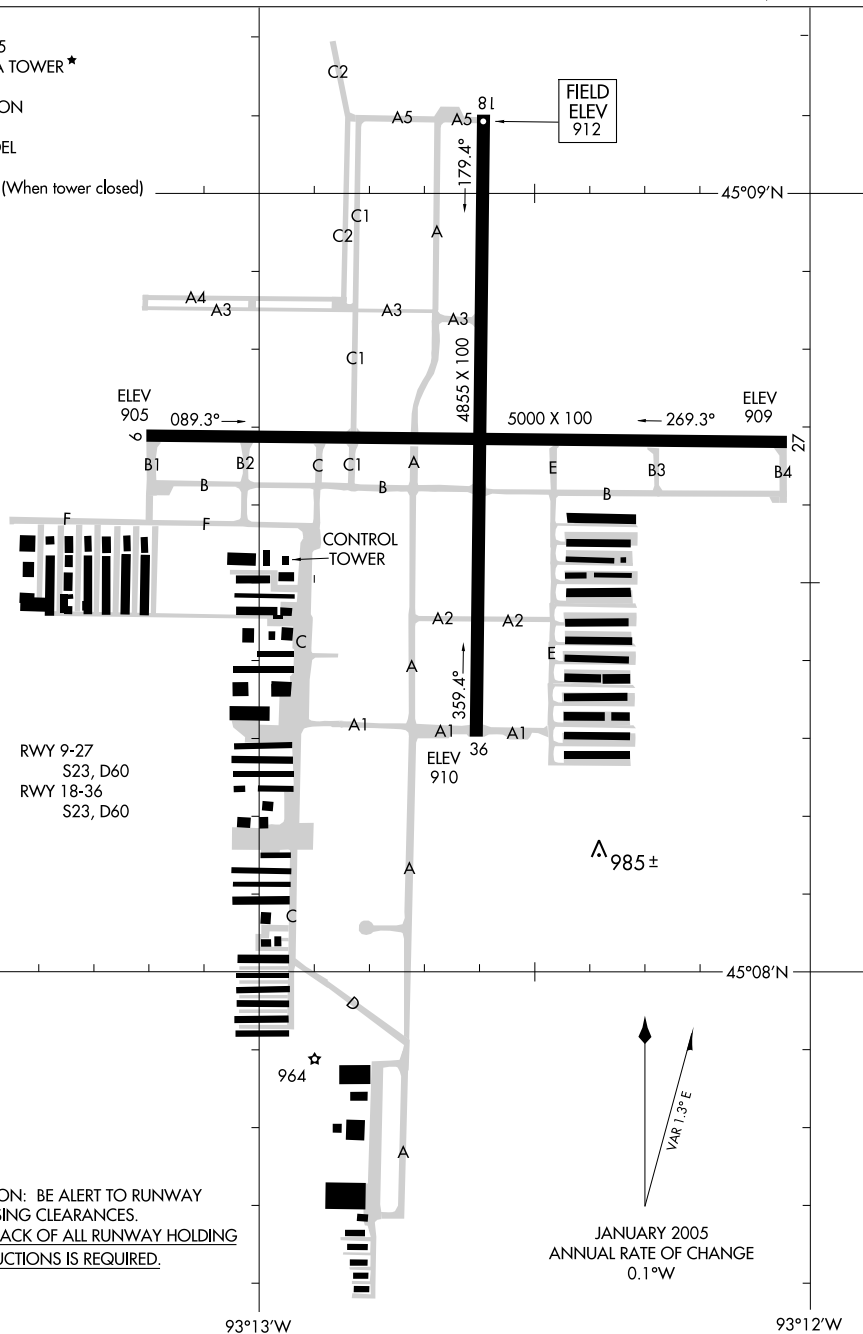
....From over AGUDE/GEF 42 DME via the GEF R-085 to GEF VORTAC, then expect radar vector to final approach course.

AIRPORT DIAGRAM

AL-5202 (FAA)

MINNEAPOLIS, MINNESOTA

ATIS
 120.625
 ANOKA TOWER ★
 132.4
 GND CON
 121.85
 CLNC DEL
 121.3
 121.85 (When tower closed)



CAUTION: BE ALERT TO RUNWAY
 CROSSING CLEARANCES.
READBCK OF ALL RUNWAY HOLDING
INSTRUCTIONS IS REQUIRED.

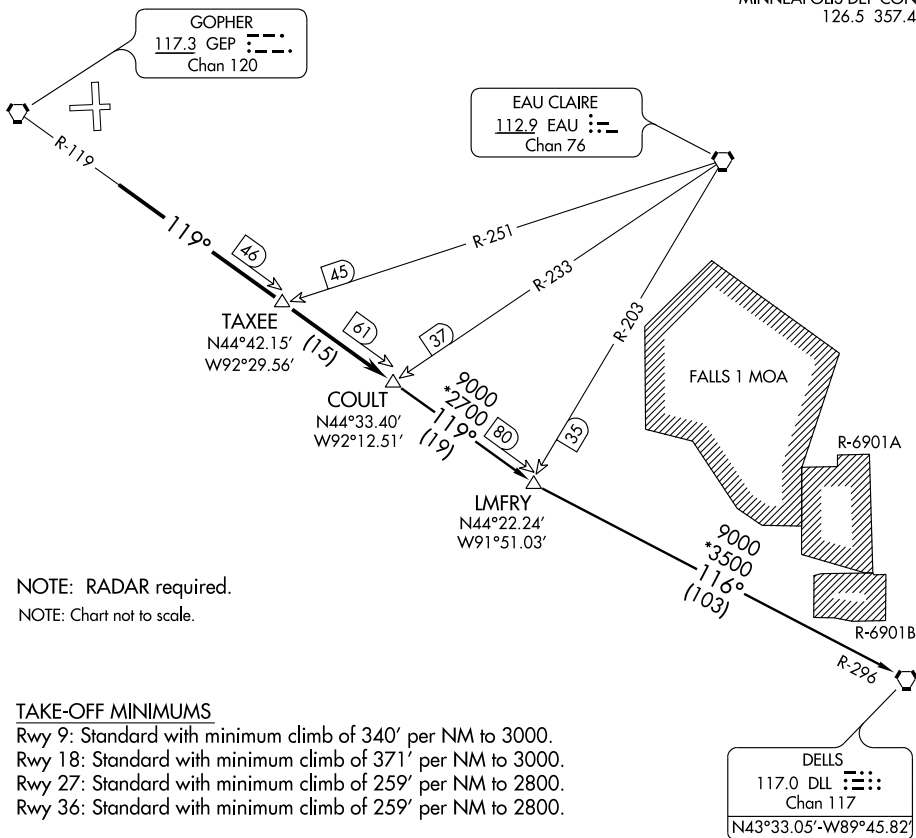
ATIS 120.625

CLNC DEL

121.3

MINNEAPOLIS DEP CON

126.5 357.4



TAKE-OFF MINIMUMS

- Rwy 9: Standard with minimum climb of 340' per NM to 3000.
- Rwy 18: Standard with minimum climb of 371' per NM to 3000.
- Rwy 27: Standard with minimum climb of 259' per NM to 2800.
- Rwy 36: Standard with minimum climb of 259' per NM to 2800.

TAKE-OFF OBSTACLE NOTES

- RWY 9: Multiple trees 821' from DER, 619' right of centerline, up to 51' AGL/961' MSL.
Tank 1.1 NM from DER, 1280' right of centerline, 170' AGL/1082' MSL.
- RWY 27: Multiple trees 559' from DER, 404' left of centerline, up to 50' AGL/946' MSL.
Multiple trees 480' from DER, 394' right of centerline, up to 26' AGL/922' MSL.
- RWY 36: Multiple trees 191' from DER, 495' right of centerline, up to 78' AGL/971' MSL.
Multiple trees 1458' from DER, 53' left of centerline, up to 59' AGL/958' MSL.

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Fly assigned heading and altitude for radar vectors to intercept GEP R-119 to COULT INT/GEP 61 DME, thence via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

DELLS TRANSITION (COULT2:DLL): From over COULT INT via GEP R-119 and DLL R-296 to DLL VORTAC.

ATIS 120.625
 CLNC DEL
 121.3
 MINNEAPOLIS DEP CON
 126.5 357.4

TAKE-OFF MINIMUMS

Rwy 9: Standard with minimum climb of 340' per NM to 3000.
 Rwy 18: Standard with minimum climb of 371' per NM to 3000.
 Rwy 27: Standard with minimum climb of 259' per NM to 2800.
 Rwy 36: Standard with minimum climb of 259' per NM to 2800.

ABERDEEN
 113.0 ABR
 Chan 77
 N45°25.04'-W98°22.12'
 L-14, H-2

R-088

60

107

10000

3800

10000

10000

10000

10000

10000

10000

10000

10000

10000

TAKE-OFF OBSTACLE NOTES

RWY 9: Multiple trees 821' from DER, 619' right of centerline, up to 51' AGL/961' MSL.
 Tank 1.1 NM from DER, 1280' right of centerline, 170' AGL/1082' MSL.
RWY 27: Multiple trees 559' from DER, 404' left of centerline, up to 50' AGL/946' MSL.
 Multiple trees 480' from DER, 394' right of centerline, up to 26' AGL/922' MSL.
RWY 36: Multiple trees 191' from DER, 495' right of centerline, up to 78' AGL/971' MSL.
 Multiple trees 1458' from DER, 53' left of centerline, up to 59' AGL/958' MSL.

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Fly assigned heading and altitude for radar vectors to MSP VOR/DME then via MSP R-281 and DWN R-095 to DWN VORTAC, thence via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

ABERDEEN TRANSITION (DWN2.ABR): From over DWN VORTAC via DWN R-271 and ABR R-088 to ABR VOR/DME.

N

ST. CLOUD
 112.1 STC
 Chan 58

R-172

INUNE
 N45°01.01'
 W93°59.54'

(32)

(20)

R-095

271°

(167)

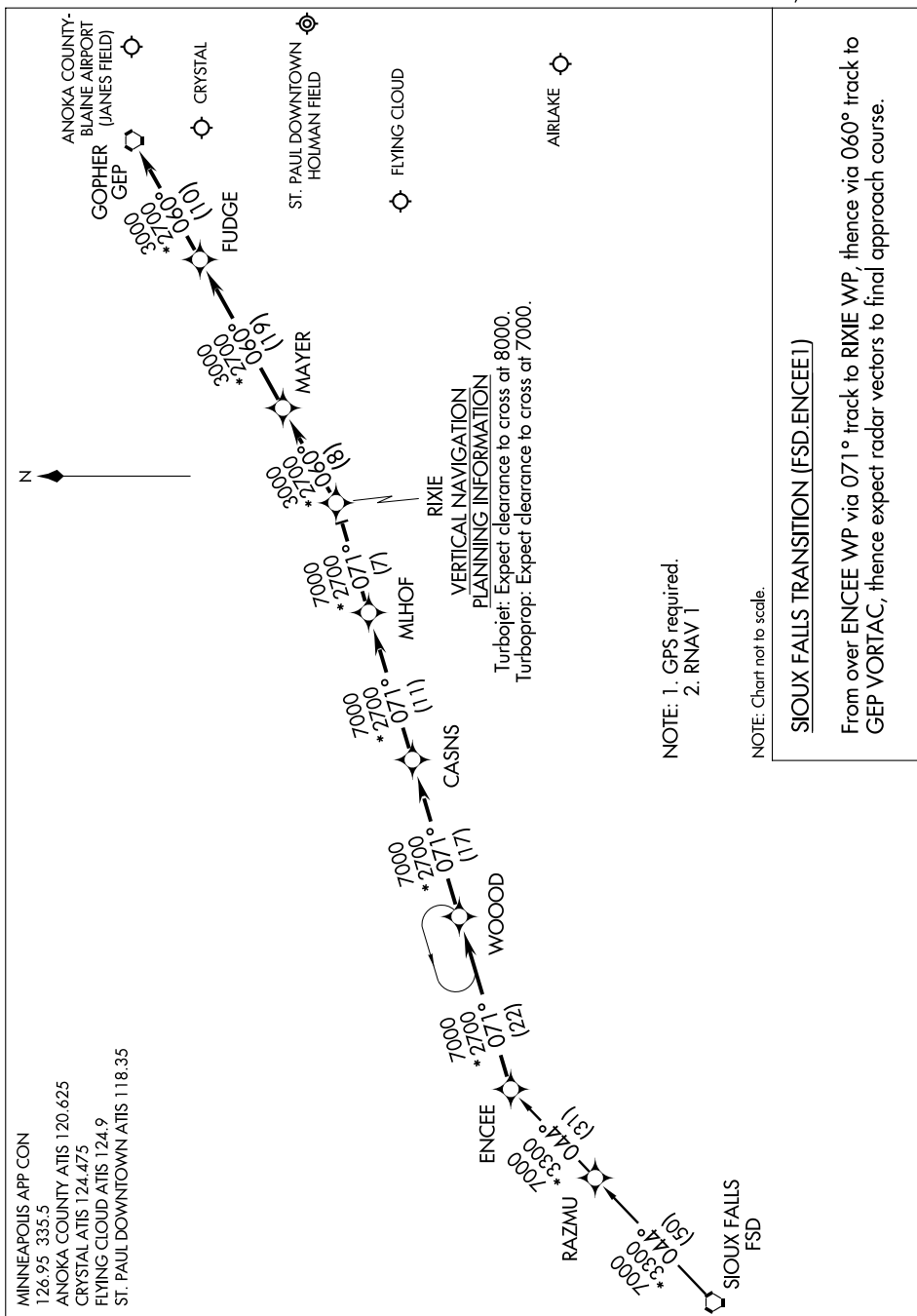
281°

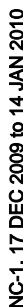
(33)

MINNEAPOLIS
 115.3 MSP
 Chan 100
 N44°53.79' - W93°14.19'

NOTE: RADAR required.

NOTE: Chart not to scale.



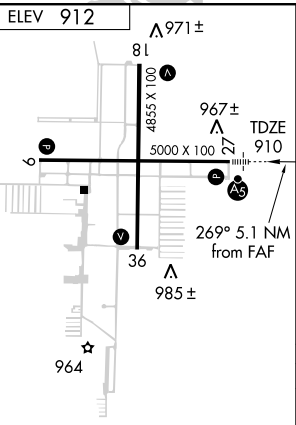
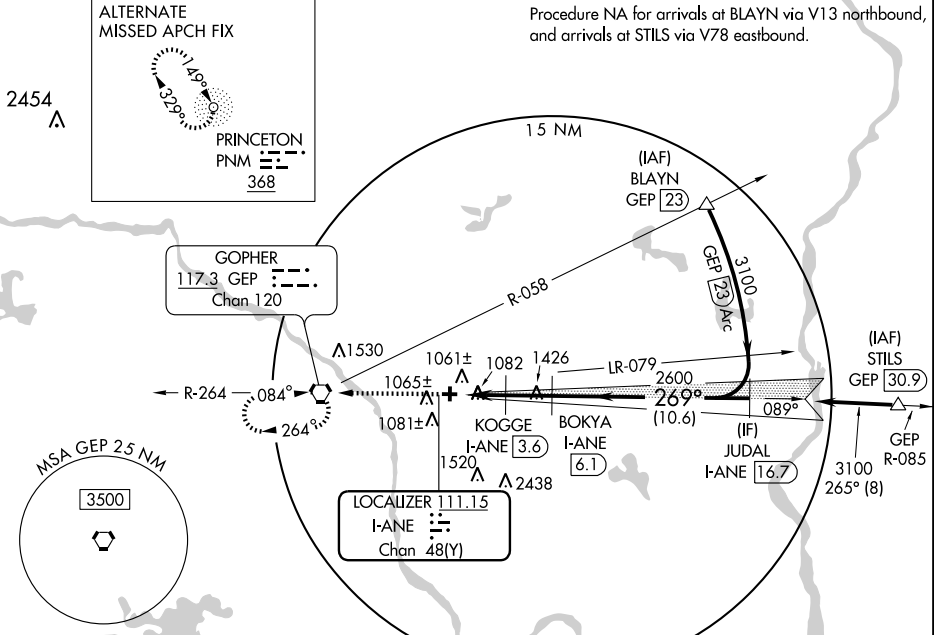


LOC/DME I-ANE	APP CRS	Rwy Idg	5000
111.15	269°	TDZE	910
Chan 48 (Y)		Apt Elev	912


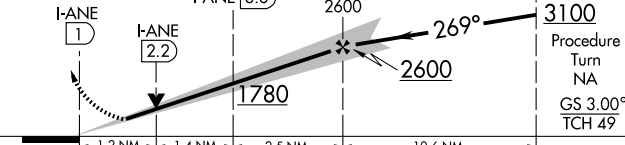
MINNEAPOLIS/ILS or LOC/DME RWY 27
ANOKA COUNTY-BLAINE AIRPORT (JANES FIELD) (ANE)

<p>⚠ If local altimeter setting not received, use Crystal altimeter setting and increase all DAs/MDAs 40 feet. VDP NA with Crystal altimeter setting.</p>	<p>MALSR </p>	<p>MISSED APPROACH: Climb to 2700 direct GEP VORTAC and hold.</p>
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ATIS 120.625	MINNEAPOLIS APP CON 126.5	ANOKA TOWER* 132.4 (CTAF) 0	GND CON 121.85	CLNC DEL 121.3	MINNEAPOLIS CLNC DEL 121.85 (When tower closed)	UNICOM 122.95
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DME REQUIRED

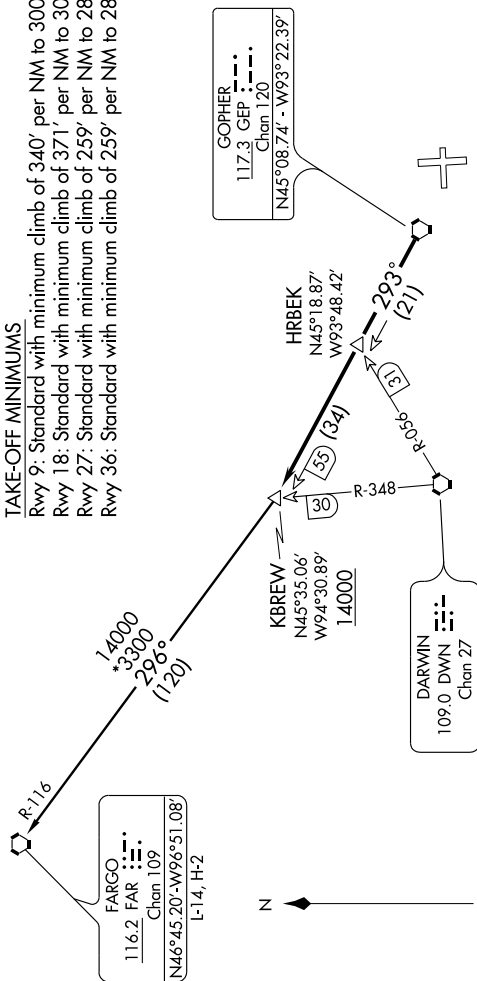
2700 ↑	GEP 117.3 	Use I-ANE DME when on the localizer course.			
					
CATEGORY	A	B	C	D	
S-ILS 27	1110-½ 200 (200-½)				
S-LOC 27	1340-½ 430 (500-½)		1340-¾ 430 (500-¾)	1340-1 430 (500-1)	
CIRCLING	1400-1 488 (500-1)		1400-1½ 488 (500-1½)	1480-2 568 (600-2)	

HIRL Rwy 9-27 0
MIRL Rwy 18-36 0
REIL Rwy 9, 18, and 36 0

ATIS 120.625
CLINC DEL
121.3
MINNEAPOLIS
126.5 357.4

TAKE-OFF MINIMUMS

Rwyw 9: Standard with minimum climb of 340' per NM to 3000.
 Rwyw 18: Standard with minimum climb of 371' per NM to 3000.
 Rwyw 27: Standard with minimum climb of 259' per NM to 2800.
 Rwyw 36: Standard with minimum climb of 259' per NM to 2800.



NOTE: RADAR required.

NOTE: Chart not to scale.

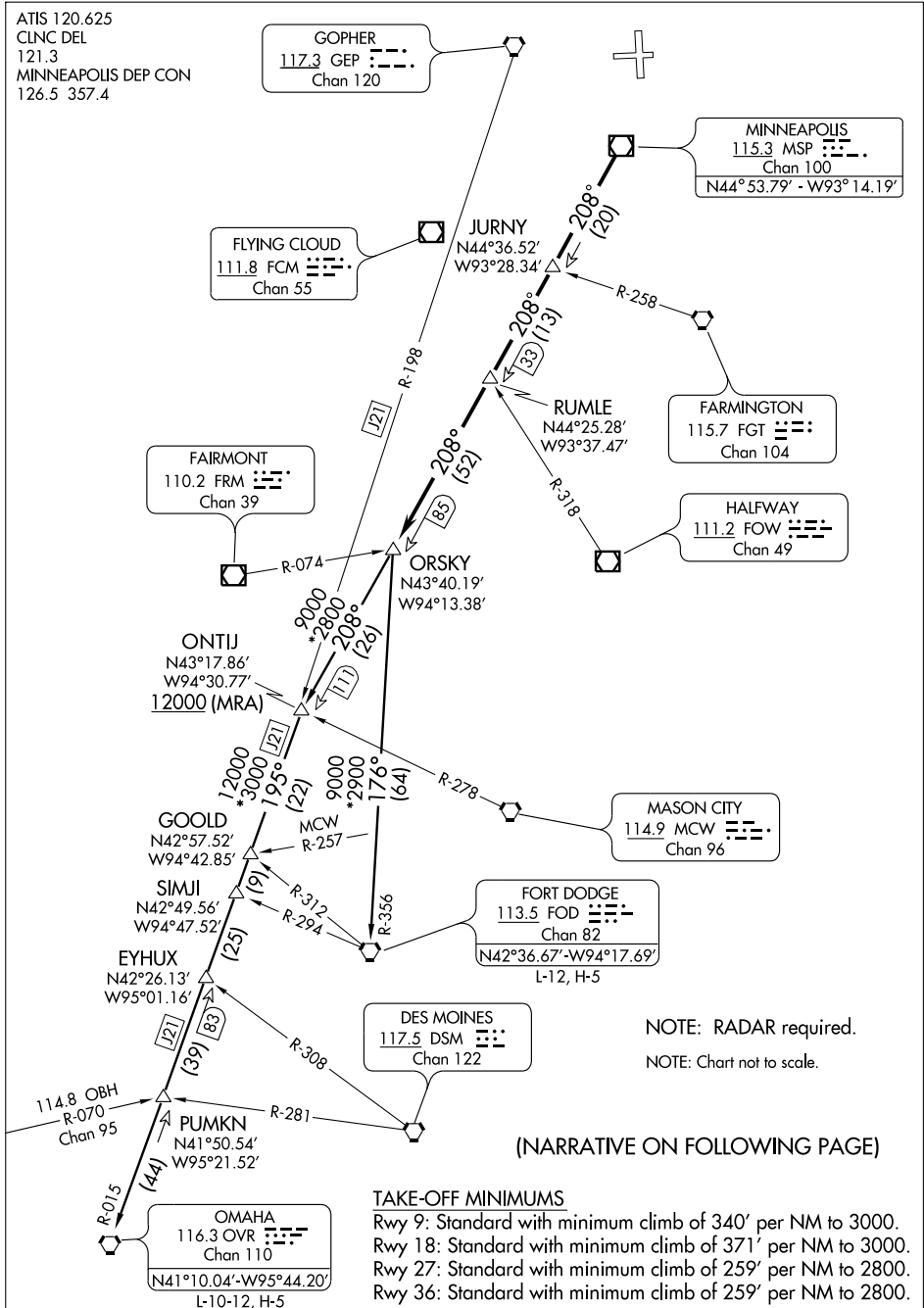
TAKE-OFF OBSTACLE NOTES

RWY 9: Multiple trees 821' from DER, 619' right of centerline, up to 51' AGL/961' MSL.
 Tank 1.1 NM from DER, 1280' right of centerline, 170' AGL/1082' MSL.
 RWY 27: Multiple trees 559' from DER, 404' left of centerline, up to 50' AGL/946' MSL.
 Multiple trees 480' from DER, 394' right of centerline, up to 26' AGL/922' MSL.
 RWY 36: Multiple trees 191' from DER, 495' right of centerline, up to 78' AGL/971' MSL.
 Multiple trees 1458' from DER, 53' left of centerline, up to 59' AGL/958' MSL.

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Fly assigned heading and altitude for radar vectors to GEP VORTAC then via GEP R-293 to KBREW INT/GEP 55 DME, thence via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

FARGO TRANSITION (KBREW2.FAR): From over GEP VORTAC via FAR R-116 to FAR VORTAC.





DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Fly assigned heading and altitude for radar vectors to MSP VOR/DME then via MSP R-208 to ORSKY INT/MSP 85 DME, thence via transition or assigned route. Expect clearance to filed altitude/flight level 10 minutes after departure.

FORT DODGE TRANSITION (ORSKY3.FOD): From over ORSKY INT via FOD R-356 to FOD VORTAC.

OMAHA TRANSITION (ORSKY3.OVR): From over ORSKY INT via MSP R-208 to ONTIJ INT then via OVR R-015 to OVR VORTAC.

TAKE-OFF OBSTACLE NOTES

RWY 9: Multiple trees 821' from DER, 619' right of centerline, up to 51' AGL/961' MSL.

Tank 1.1 NM from DER, 1280' right of centerline, 170' AGL/1082' MSL.

RWY 27: Multiple trees 559' from DER, 404' left of centerline, up to 50' AGL/946' MSL.

Multiple trees 480' from DER, 394' right of centerline, up to 26' AGL/922' MSL.

RWY 36: Multiple trees 191' from DER, 495' right of centerline, up to 78' AGL/971' MSL.

Multiple trees 1458' from DER, 53' left of centerline, up to 59' AGL/958' MSL.

WAAS CH 82312 W09A	APP CRS 089°	Rwy Idg TDZE Apt Elev 5000 910 912
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MINNEAPOLIS/
ANOKA COUNTY-BLAINE AIRPORT (JANES FIELD) (A.N.E.)

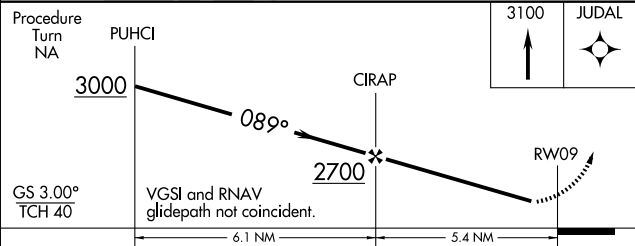
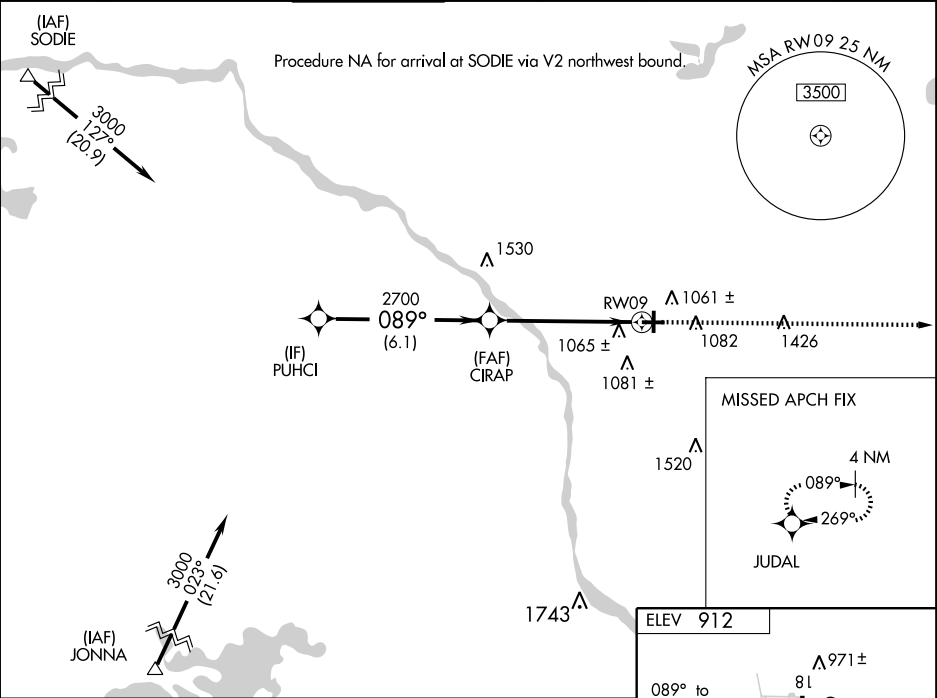
RNAV (GPS) RWY 9

▼ Baro-VNAV NA when using Crystal altimeter setting.

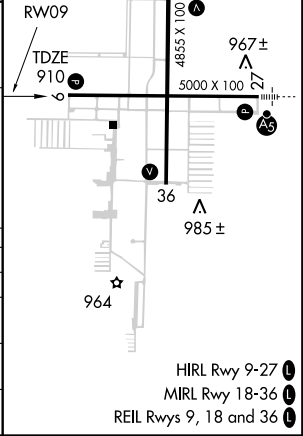
▲ For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Crystal altimeter setting and increase all DA 25 feet, all MDA 40 feet, increase LNAV/VNAV all Cnts visibility ¼ mile, LNAV Cat D ¼ mile.

MISSED APPROACH: Climb to 3100 direct JUDAL and hold.

ATIS 120.625	MINNEAPOLIS APP CON 126.5	ANOKA TOWER* 132.4 (CTAF) 0	GND CON 121.85	CLNC DEL 121.3	MINNEAPOLIS CLNC DEL 121.85 (When tower closed)	UNICOM 122.95
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CATEGORY	A	B	C	D
LPV DA	1 225-1 ¼		315 (400-1 ¼)	
LNAV/ VNAV	1 352-1 ½		442 (500-1 ½)	
LNAV MDA	1 320-1 410 (500-1)		1 320-1 ¼ 410 (500-1 ¼)	
CIRCLING	1 400-1 488 (500-1)		1 400-1 ½ 488 (500-1 ½) 1 480-2 568 (600-2)	



WAAS CH 78300 W27A	APP CRS 269°	Rwy Idg TDZE 5000 910 Apt Elev 912
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RNAV (GPS) RWY 27

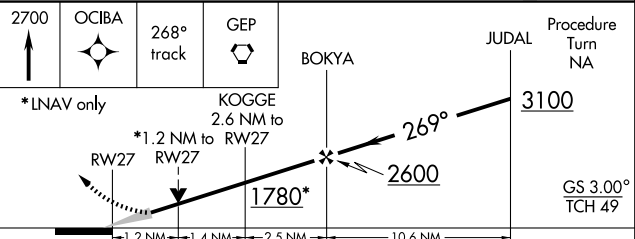
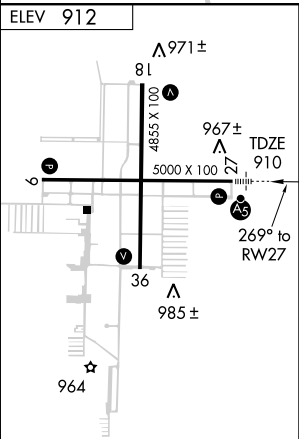
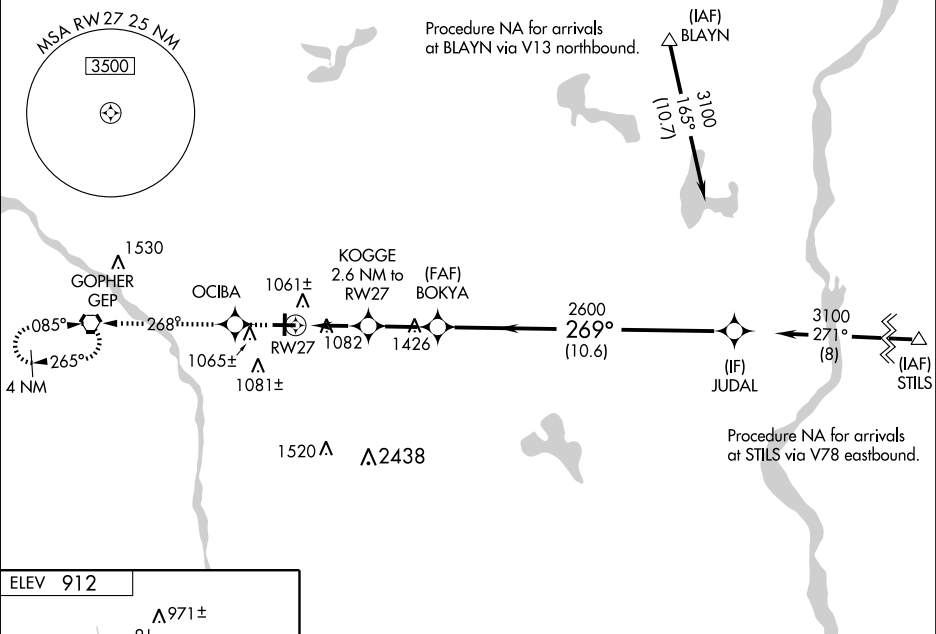
MINNEAPOLIS/ ANOKA COUNTY-BLAINE AIRPORT (JANES FIELD) (A.N.E.)

⚠ Baro-VNAV and VDP NA when using Crystal altimeter setting.
⚠ If local altimeter setting not received, use Crystal altimeter setting and increase all DAs/MDAs 40 feet.
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F).
DME/DME RNP-0.3 NA.
For inoperative MALSR, increase LNAV Cat C visibility to 1¼.

MALSR

MISSED APPROACH: Climb to 2700 direct OCIBA and via 268° track to GEP VORTAC and hold.

ATIS 120.625	MINNEAPOLIS APP CON 126.5	ANOKA TOWER★ 132.4 (CTAF) 0	GND CON 121.85	CLNC DEL 121.3	MINNEAPOLIS CLNC DEL 121.85 (When tower closed)	UNICOM 122.95
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CATEGORY	A	B	C	D
LPV DA	1160-½ 250 (300-½)			
LNAV/VNAV DA	1371-1 461 (500-1)			
LNAV MDA	1340-½ 430 (500-½)			1340-1 430 (500-1)
CIRCLING	1400-1 488 (500-1)		1400-1½ 488 (500-1½)	1480-2 568 (600-2)

HIRL Rwy 9-27 **0**
MIRL Rwy 18-36 **0**
REIL Rwy 9, 18, and 36 **0**

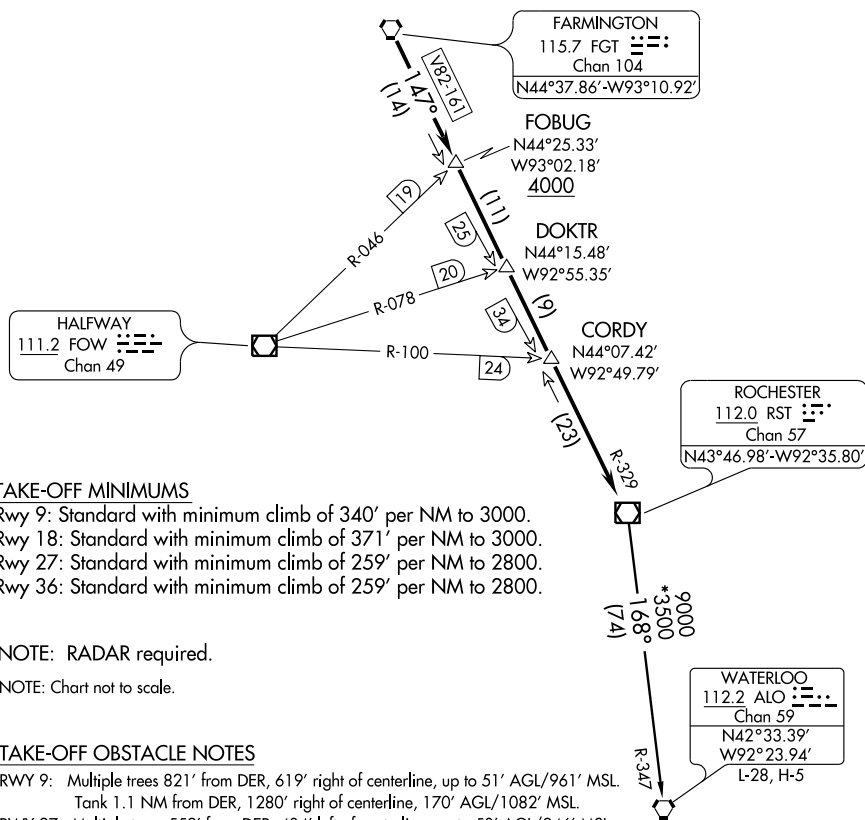
NC-1. 17 DEC 2009 to 14 JAN 2010

ROCHESTER THREE DEPARTURE

SL-5202 (FAA)

MINNEAPOLIS, MINNESOTA

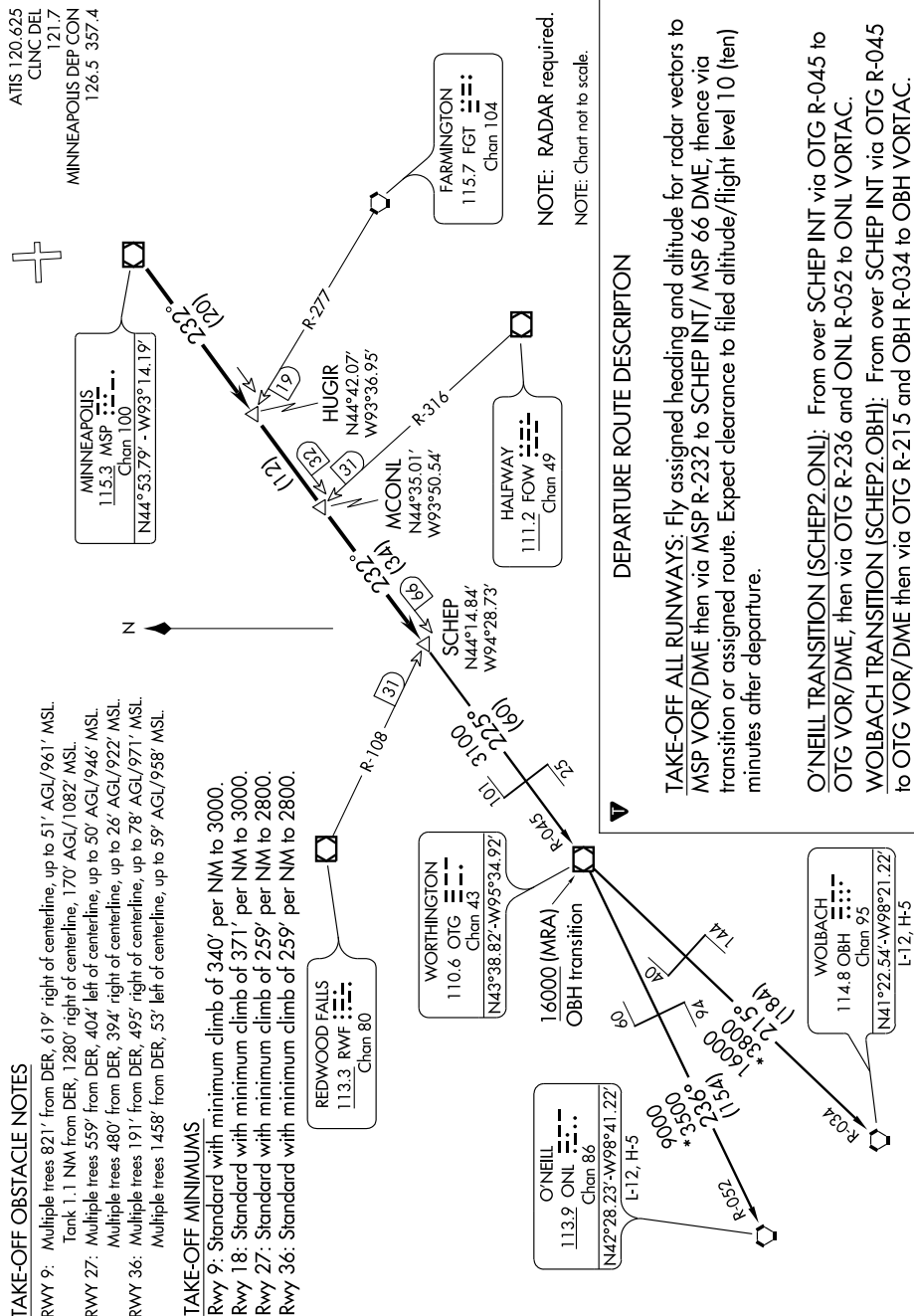
ATIS 120.625
CLNC DEL
121.3
MINNEAPOLIS DEP CON
126.5 357.4



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Fly assigned heading and altitude for radar vectors to FGT VORTAC then via FGT R-147 and RST R-329 to RST VOR/DME. Cross FOBUG INT/FGT 14 DME at or above 4000, thence via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

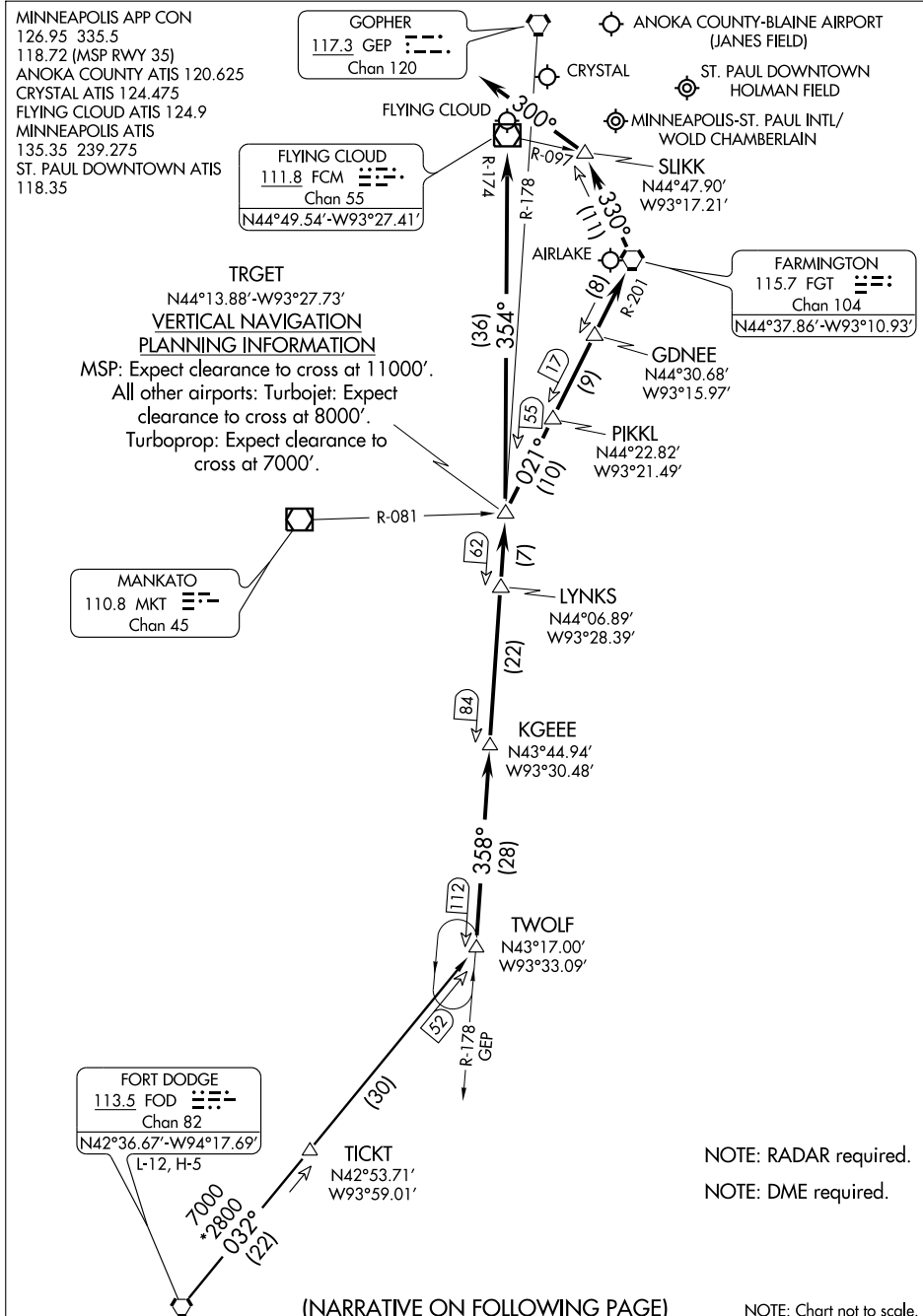
WATERLOO TRANSITION (RST3.ALO): From over RST VOR/DME via RST R-168 and ALO R-347 to ALO VORTAC.



TWOLF ONE ARRIVAL

ST-264 (FAA)

MINNEAPOLIS, MINNESOTA



ARRIVAL DESCRIPTION

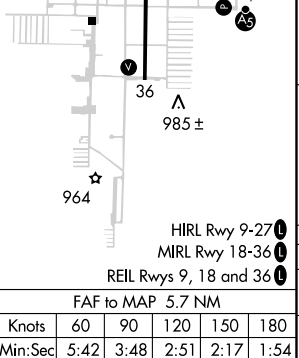
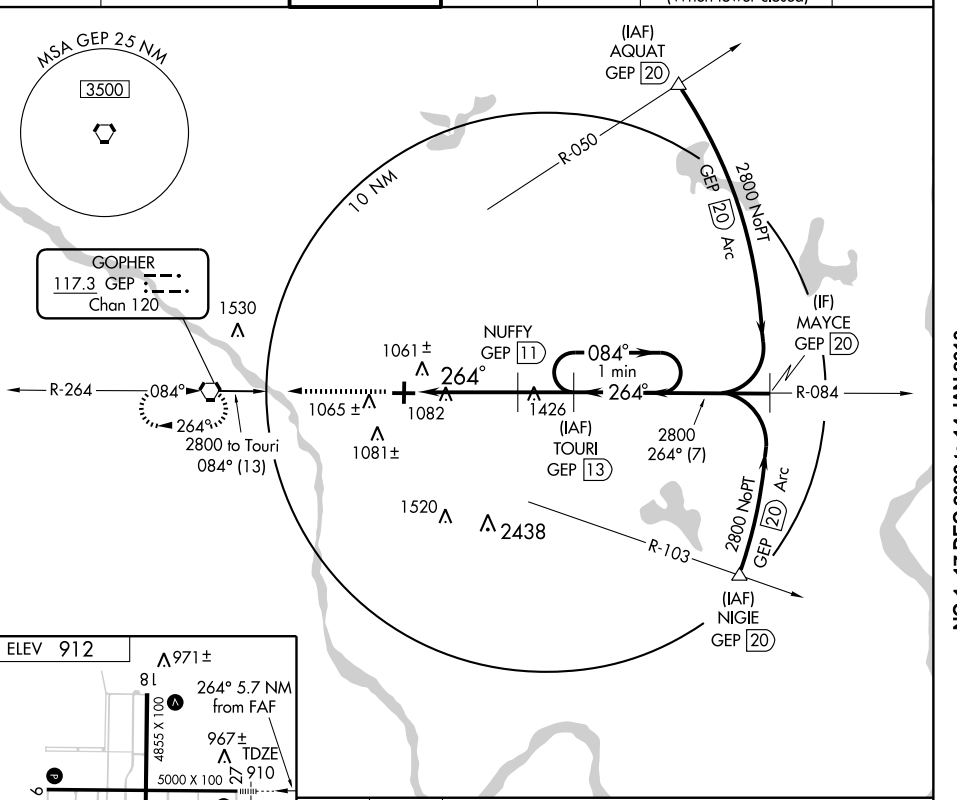
FORT DODGE TRANSITION (FOD.TWOLF1): From over FOD VORTAC via FOD R-032 to TWOLF. Thence....

....From over TWOLF via GEP R-178 to KGEFF, then via GEP R-178 to TRGET INT, then via FGT R-201 to FGT VORTAC. Thence....

LANDING MSP RWYS 12L/R: From over FGT VORTAC via FGT R-330 to SLIKK, thence via 300° heading for radar vectors to final approach course.

LANDING MSP RWYS 30L/R, 4, 22, 17, 35: Via radar vectors to final approach course.

ALL OTHER AIRPORTS: From over TRGET INT via FCM VOR/DME R-174 to FCM VOR/DME then expect radar vectors to final approach course.



2800 GEP 117.3				
TOURI GEP 13				
One Minute Holding Pattern				
2800 084° 264° 2120 3.05° TCH 50				
-1.2 NM -2.5 NM -2 NM				
CATEGORY	A	B	C	D
S-27	1340-1/2	430 (500-1/2)	1340-3/4	1340-1
CIRCLING	1400-1	488 (500-1)	430 (500-3/4)	430 (500-1)
			1400-1/2	1480-2
			488 (500-1/2)	568 (600-2)

NC-1. 17 DEC 2009 to 14 JAN 2010

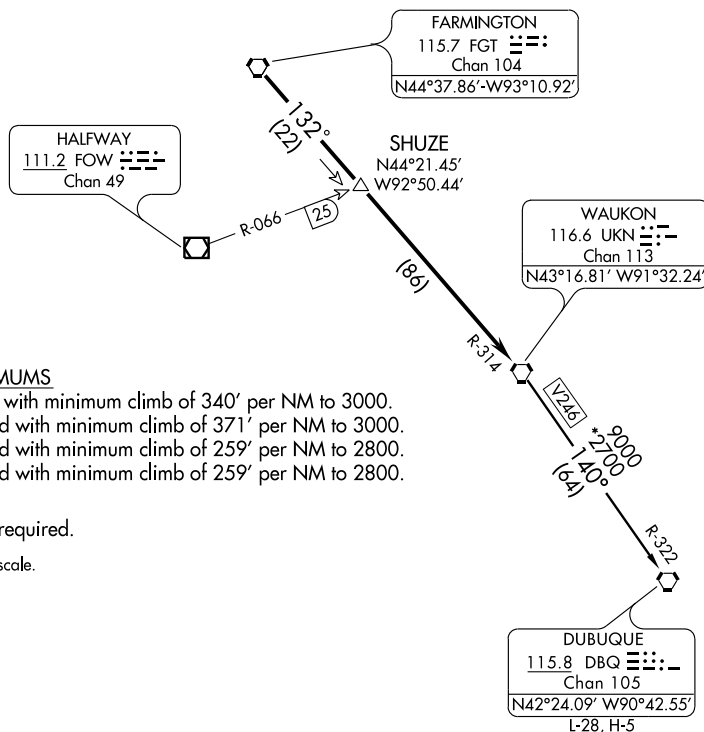
FAF to MAP 6.5 NM					
Knots	60	90	120	150	180
Min:Sec	6:30	4:20	3:15	2:36	2:10

WAUKON TWO DEPARTURE

SL-5202 (FAA)

MINNEAPOLIS, MINNESOTA

ATIS 120.625
 CLNC DEL
 121.3
 MINNEAPOLIS DEP CON
 126.5 357.4



TAKE-OFF MINIMUMS

Rwy 9: Standard with minimum climb of 340' per NM to 3000.
 Rwy 18: Standard with minimum climb of 371' per NM to 3000.
 Rwy 27: Standard with minimum climb of 259' per NM to 2800.
 Rwy 36: Standard with minimum climb of 259' per NM to 2800.

NOTE: RADAR required.

NOTE: Chart not to scale.

TAKE-OFF OBSTACLE NOTES

RWY 9: Multiple trees 821' from DER, 619' right of centerline, up to 51' AGL/961' MSL.
 Tank 1.1 NM from DER, 1280' right of centerline, 170' AGL/1082' MSL.
 RWY 27: Multiple trees 559' from DER, 404' left of centerline, up to 50' AGL/946' MSL.
 Multiple trees 480' from DER, 394' right of centerline, up to 26' AGL/922' MSL.
 RWY 36: Multiple trees 191' from DER, 495' right of centerline, up to 78' AGL/971' MSL.
 Multiple trees 1458' from DER, 53' left of centerline, up to 59' AGL/958' MSL.

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Fly assigned heading and altitude for radar vectors to FGT VORTAC then via FGT R-132 and UKN R-314 to UKN VORTAC, thence via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

DUBUQUE TRANSITION (UKN2.DBQ): From over UKN VORTAC via UKN R-140 and DBQ R-322 to DBQ VORTAC.

WLSTN TWO DEPARTURE

SL-5202 (FAA)

MINNEAPOLIS, MINNESOTA

TAKE-OFF OBSTACLE NOTES

RWY 9: Multiple trees 821' from DER, 619' right of centerline, up to 51' AGL/961' MSL.
 Tank 1.1 NM from DER, 1280' right of centerline, 170' AGL/1082' MSL.
 RWY 27: Multiple trees 559' from DER, 404' left of centerline, up to 50' AGL/946' MSL.
 Multiple trees 480' from DER, 394' right of centerline, up to 26' AGL/922' MSL.
 RWY 36: Multiple trees 191' from DER, 495' right of centerline, up to 78' AGL/971' MSL.
 Multiple trees 1458' from DER, 53' left of centerline, up to 59' AGL/958' MSL.

WLSTN
N45°28.44'
W91°00.92'

SNINE
N45°15.11
W97°39.0

GOPHER
117.3 GEPI :
Chap 120

MINNEAPOLIS
15.3 MSP :--.

TAKE-OFF MINIMUMS

Rwy 9: Standard with minimum climb of 340' per NM to 3000.
 Rwy 18: Standard with minimum climb of 371' per NM to 3000.
 Rwy 27: Standard with minimum climb of 259' per NM to 2800.
 Rwy 36: Standard with minimum climb of 259' per NM to 2800.

GREEN BAY
115.5 GRB $\frac{11}{11}$
Chan 102
N44°33.31'-W88°11.69'
L-31, H-2

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Fly assigned heading and altitude for radar vectors to GEP R-072 to WLSTN INT/GEP 102 DME, thence via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

NOTE: RADAR and DME required.

NOTE: Chart not to scale.

GREEN BAY TRANSITION (WLSTN2.GRB): From over WLSTN INT via GRB R-295 to GRB VORTAC.

NC-1. 17 DEC 2009 to 14 JAN 2010



ATIS 120.625
CLNC DEL
121.3
MINNEAPOLIS DEP CON
126.5 357.4

MINNEAPOLIS
115.3 MSP
Chan 100
N44°53.79'-W93°14.19'

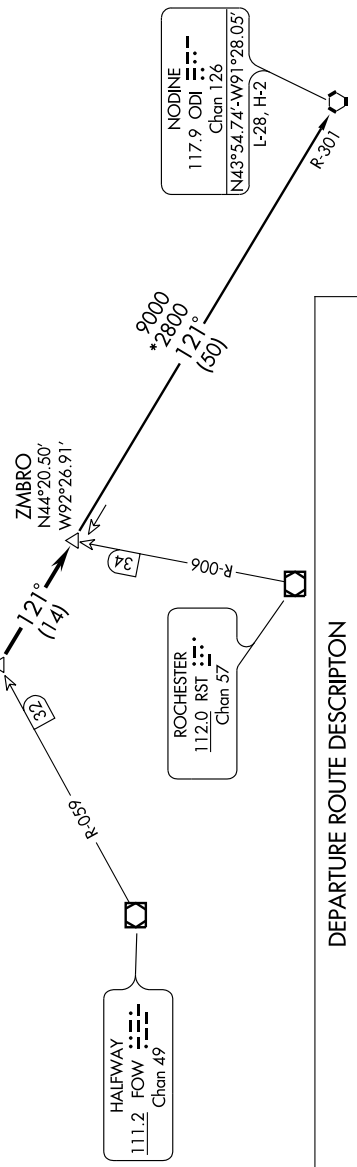


TAKE-OFF OBSTACLE NOTES

- RWY 9: Multiple trees 821' from DER, 619' right of centerline, up to 51' AGL/961' MSL.
Tank 1.1 NM from DER, 1280' right of centerline, 170' AGL/1082' MSL.
RWY 27: Multiple trees 559' from DER, 404' left of centerline, up to 50' AGL/946' MSL.
Multiple trees 480' from DER, 394' right of centerline, up to 26' AGL/922' MSL.
RWY 36: Multiple trees 191' from DER, 495' right of centerline, up to 78' AGL/971' MSL.
Multiple trees 1458' from DER, 53' left of centerline, up to 59' AGL/958' MSL.

TAKE-OFF MINIMUMS

- Rwy 9: Standard with minimum climb of 340' per NM to 3000.
Rwy 18: Standard with minimum climb of 371' per NM to 3000.
Rwy 27: Standard with minimum climb of 259' per NM to 2800.
Rwy 36: Standard with minimum climb of 259' per NM to 2800.



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Fly assigned heading and altitude for radar vectors to MSP VOR/DME then via MSP R-138 to JEDET INT/ MSP 34 DME, at or above 4000; then via ODI R-301 to ZMBRO INT/ ODI 50 DME, thence via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

NODINE TRANSITION (ZMBRO2.ODI): From over ZMBRO INT via ODI R-301 to ODI VORTAC.

NOTE: RADAR required.
NOTE: Chart not to scale.

AGUDE ONE ARRIVAL

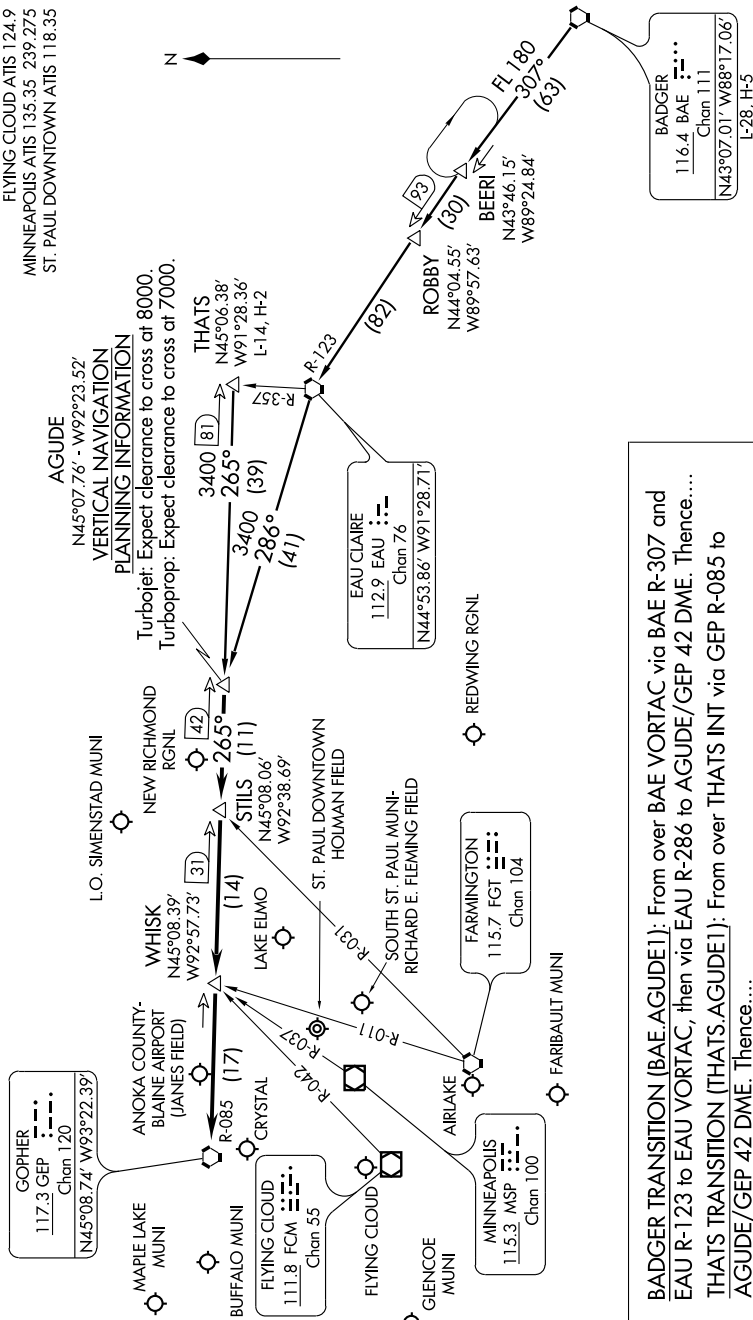
ST-263 (FAA)

MINNEAPOLIS-ST. PAUL, MINNESOTA

MINNEAPOLIS APP CON
126.95 335.5
ANOKA COUNTY ATIS 120.625
CRYSTAL ATIS 124.475
FLYING CLOUD ATIS 124.9
MINNEAPOLIS ATIS 135.35 239.275
ST. PAUL DOWNTOWN ATIS 118.35

AGUDE
N45°07.76' - W92°23.52'
VERTICAL NAVIGATION
PLANNING INFORMATION

Turbopjet: Expect clearance to cross at 8000.
Turboprop: Expect clearance to cross at 7000.



BADGER TRANSITION (BAE AGUDE1): From over BAE VORTAC via BAE R-307 and EAU R-123 to EAU VORTAC, then via EAU R-286 to AGUDE/GEF 42 DME. Thence....
THATS TRANSITION (THATS.AGUDE1): From over THATS INT via GEP R-085 to AGUDE/GEF 42 DME. Thence....

....From over AGUDE/GEF 42 DME via the GEP R-085 to GEP VORTAC, then expect radar vector to final approach course.

NOTE: DME and RADAR required.

NOTE: Chart not to scale.

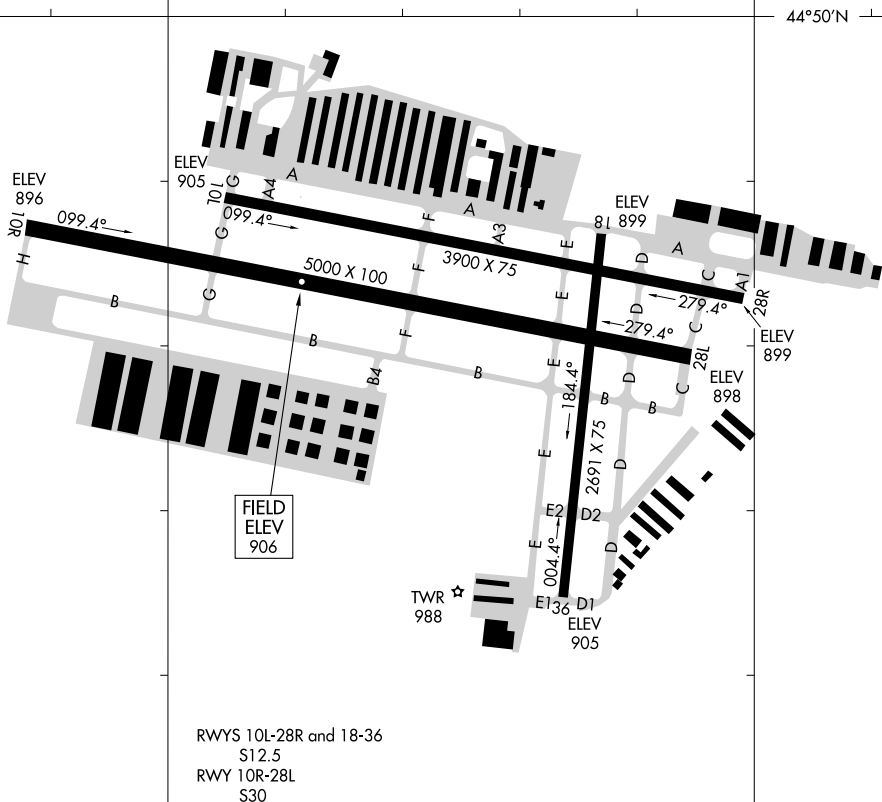
AIRPORT DIAGRAM

AL-5094 (FAA)

MINNEAPOLIS/ FLYING CLOUD (FCM)
MINNEAPOLIS, MINNESOTA

ATIS
124.9
FLYING CLOUD TOWER ★
118.1
GND CON
121.7
CLNC DEL
121.7 (When Tower Closed)

VAR 1.6° E
JANUARY 2005
ANNUAL RATE OF CHANGE
0.1° W



RWYS 10L-28R and 18-36
S12.5
RWY 10R-28L
S30

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

93°28'W

93°27'W

NC-1, 17 DEC 2009 to 14 JAN 2010

LOC I-FCM	APP CRS	Rwy Idg	5000
109.7	098°	TDZE	906
		Apt Elev	906

COPTER ILS or LOC RWY 10R

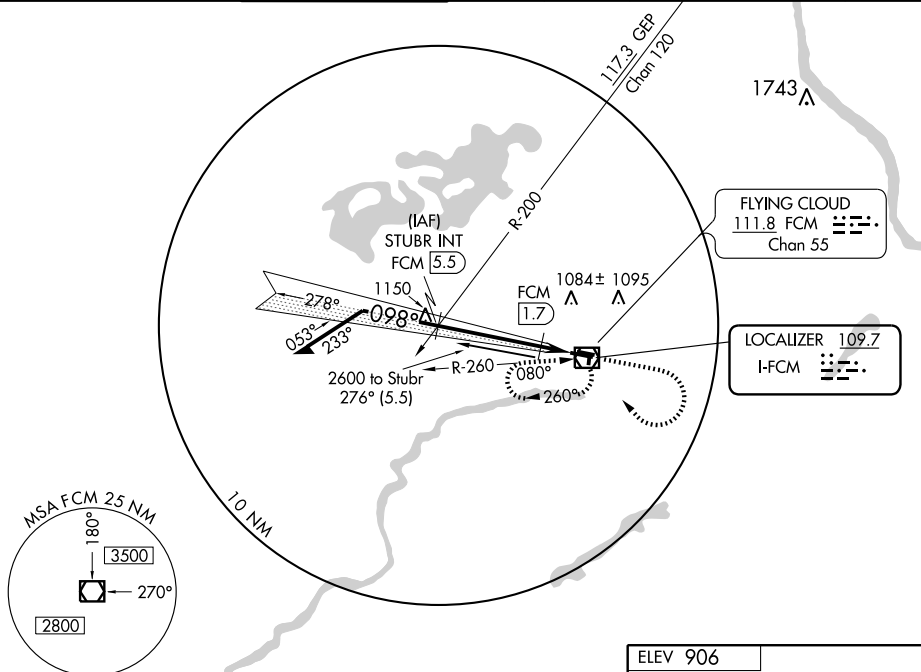
MINNEAPOLIS/ FLYING CLOUD (FCM)

▲ For inoperative MALSR increase visibility to ½ mile.

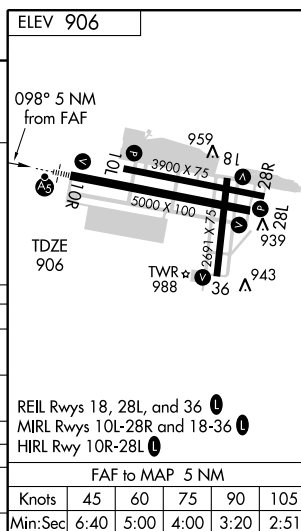
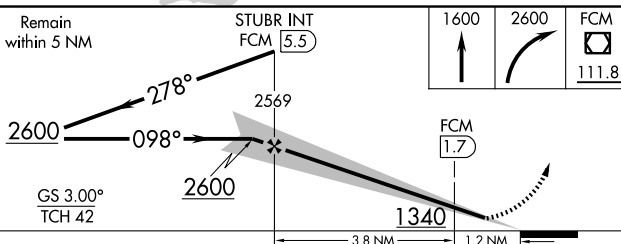


MISSED APPROACH: Climb to 1600 then climbing right turn to 2600 direct FCM VOR/DME and hold.

ATIS 124.9	MINNEAPOLIS APP CON 134.7 284.7	FLYING CLOUD TOWER ★ 118.1 (CTAF) 0	GND CON 121.7	CLNC DEL 121.7	MINNEAPOLIS CLNC DEL 121.7 (When tower closed)	UNICOM 122.95
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NC-1: 17 DEC 2009 to 14 JAN 2010



CATEGORY	COPTER	B	C	D
S-ILS 10R	1106-¼ 200 (200-¼)		NA	
S-LOC 10R	1340-¼ 434 (500-¼)		NA	
CIRCLING			NA	
DME MINIMUMS				
S-LOC 10R	1280-¼ 374 (400-¼)		NA	
CIRCLING			NA	

REIL Rwy 18, 28L, and 36
MIRL Rwy 10L-28R and 18-36
HIRL Rwy 10R-28L

FAF to MAP 5 NM

Knots	45	60	75	90	105
Min:Sec	6:40	5:00	4:00	3:20	2:51

COULT TWO DEPARTURE

08269

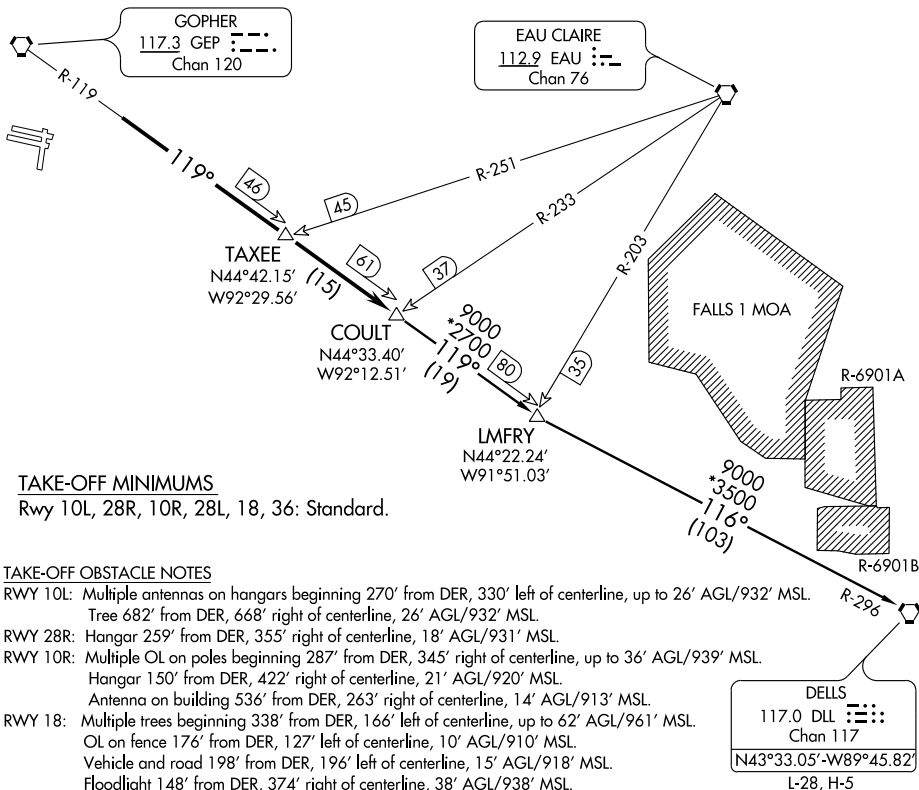
SL-5094 (FAA)

MINNEAPOLIS/FLYING CLOUD (F'CM)
MINNEAPOLIS, MINNESOTA

ATIS 124.9
CLNC DEL
121.7
MINNEAPOLIS DEP CON
134.7 357.4

GOPHER
117.3 GEP :---:
Chan 120

EAU CLAIRE
112.9 EAU :---:
Chan 76



TAKE-OFF MINIMUMS

Rwy 10L, 28R, 10R, 28L, 18, 36: Standard.

TAKE-OFF OBSTACLE NOTES

RWY 10L: Multiple antennas on hangars beginning 270' from DER, 330' left of centerline, up to 26' AGL/932' MSL.

Tree 682' from DER, 668' right of centerline, 26' AGL/932' MSL.

RWY 28R: Hangar 259' from DER, 355' right of centerline, 18' AGL/931' MSL.

RWY 10R: Multiple OL on poles beginning 287' from DER, 345' right of centerline, up to 36' AGL/939' MSL.

Hangar 150' from DER, 422' right of centerline, 21' AGL/920' MSL.

Antenna on building 536' from DER, 263' right of centerline, 14' AGL/913' MSL.

RWY 18: Multiple trees beginning 338' from DER, 166' left of centerline, up to 62' AGL/961' MSL.

OL on fence 176' from DER, 127' left of centerline, 10' AGL/910' MSL.

Vehicle and road 198' from DER, 196' left of centerline, 15' AGL/918' MSL.

Floodlight 148' from DER, 374' right of centerline, 38' AGL/938' MSL.

OL on hangar 282' from DER, 317' right of centerline, 37' AGL/937' MSL.

RWY 36: Wind vane 923' from DER, 404' left of centerline, 61' AGL/960' MSL.

Vent on building 943' from DER, 295' left of centerline, 44' AGL/943' MSL.

Pole 714' from DER, 351' left of centerline, 33' AGL/932' MSL.

Multiple trees beginning 504' from DER, 324' right of centerline, up to 67' AGL/966' MSL.

NOTE: RADAR required.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Fly assigned heading and altitude for radar vectors to intercept GEP R-119 to COULT INT/GEP 61 DME, thence via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

DELLS TRANSITION (COULT2.DLL): From over COULT INT via GEP R-119 and DLL R-296 to DLL VORTAC.

NC-1, 17 DEC 2009 to 14 JAN 2010

DARWIN TWO DEPARTURE

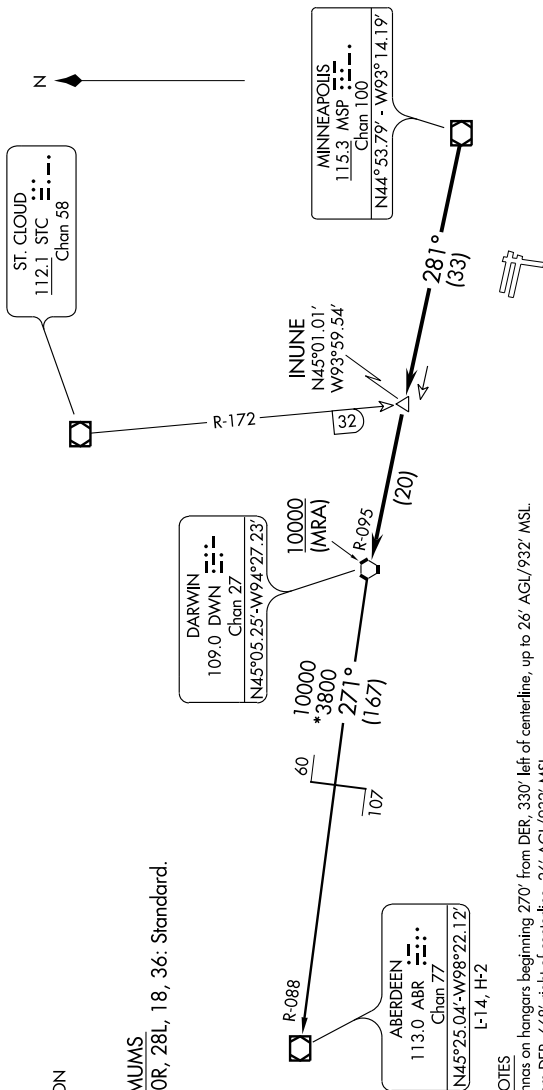
SL-5094 (FAA)

MINNEAPOLIS/ FLYING CLOUD (F'CM)
MINNEAPOLIS, MINNESOTA

ATIS 124.9
CLNC DEL
121.7
MINNEAPOLIS DEP CON
134.7 357.4

TAKE-OFF MINIMUMS

Rwy 10L, 28R, 10R, 28L, 18, 36: Standard.



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Fly assigned heading and altitude for radar vectors to MSP VOR/DME then via MSP R-281 and DWN R-095 to DWN VORTAC, thence via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

ABERDEEN TRANSITION (DWN2.ABR): From over DWN VORTAC via DWN R-271 and ABR R-088 to ABR VOR/DME.

TAKE-OFF OBSTACLE NOTES

RWY 10L: Multiple antennas on hangars beginning 270' from DER, 330' left of centerline, up to 26' AGL/932' MSL.

Tree 682' from DER, 648' right of centerline, 26' AGL/932' MSL.

RWY 28R: Hangar 259' from DER, 355' right of centerline, 18' AGL/931' MSL.

RWY 10R: Multiple OL on poles beginning 287' from DER, 345' right of centerline, up to 36' AGL/939' MSL.

Hangar 150' from DER, 422' right of centerline, 21' AGL/920' MSL.

RWY 18: Antenna on building 536' from DER, 263' right of centerline, 14' AGL/913' MSL.

Multiple trees beginning 338' from DER, 166' left of centerline, up to 62' AGL/961' MSL.

OL on fence 176' from DER, 127' left of centerline, 10' AGL/910' MSL.

Vehicle and road 198' from DER, 196' left of centerline, 15' AGL/918' MSL.

Floodlight 148' from DER, 374' right of centerline, 38' AGL/938' MSL.

OL on hangar 282' from DER, 317' right of centerline, 37' AGL/937' MSL.

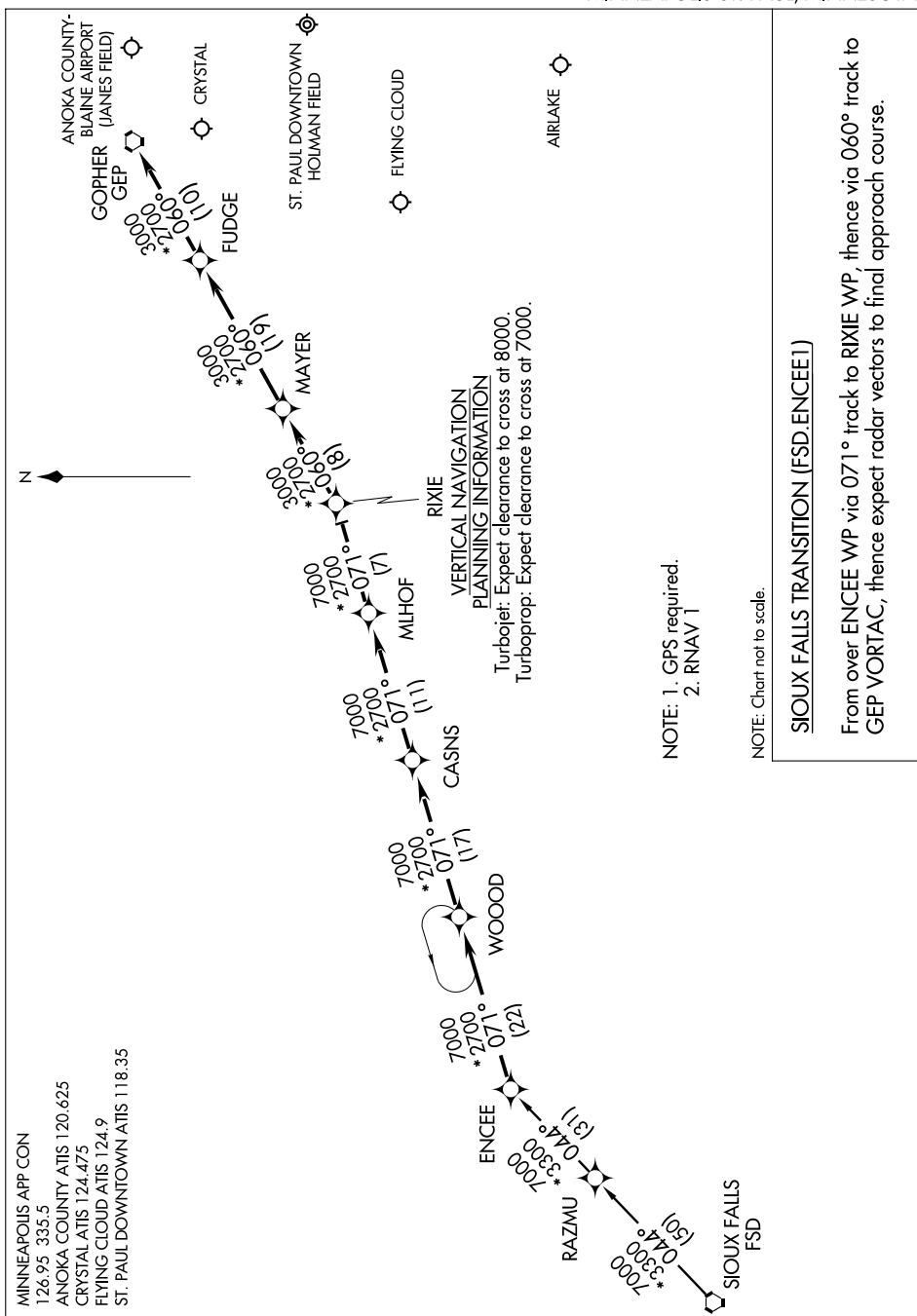
RWY 36: Wind vane 923' from DER, 404' left of centerline, 61' AGL/960' MSL.

Vent on building 943' from DER, 295' left of centerline, 44' AGL/943' MSL.

Pole 714' from DER, 351' left of centerline, 33' AGL/932' MSL.

Multiple trees beginning 504' from DER, 324' right of centerline,

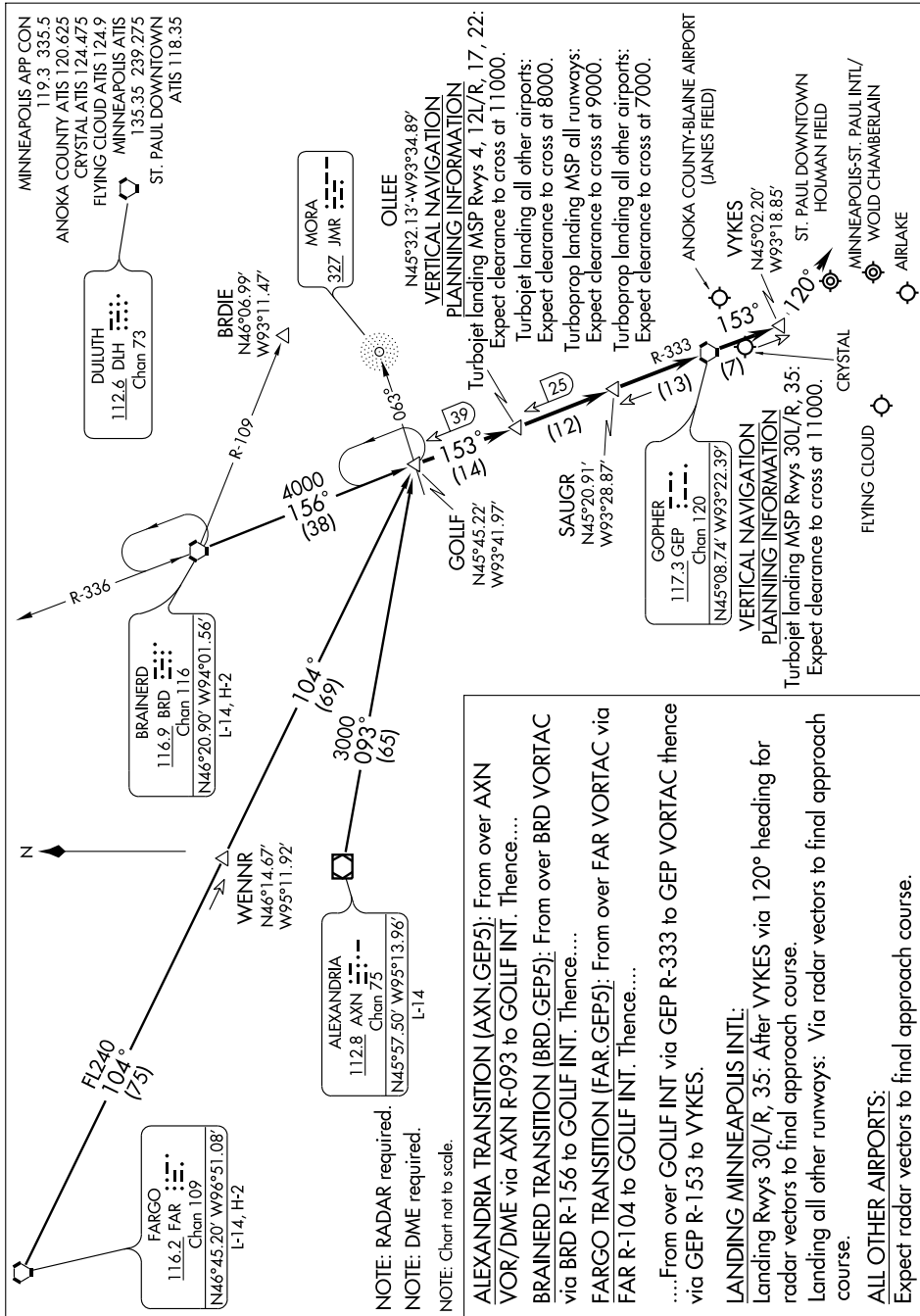
up to 67' AGL/966' MSL.



GOPHER FIVE ARRIVAL

ST-264 (FAA)

MINNEAPOLIS, MINNESOTA



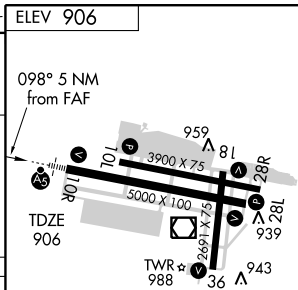
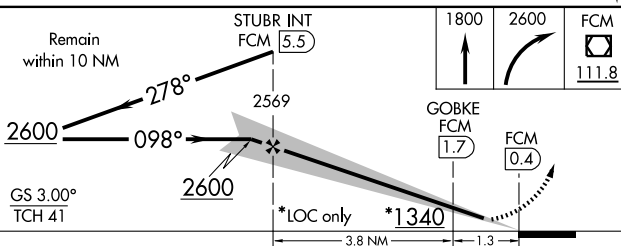
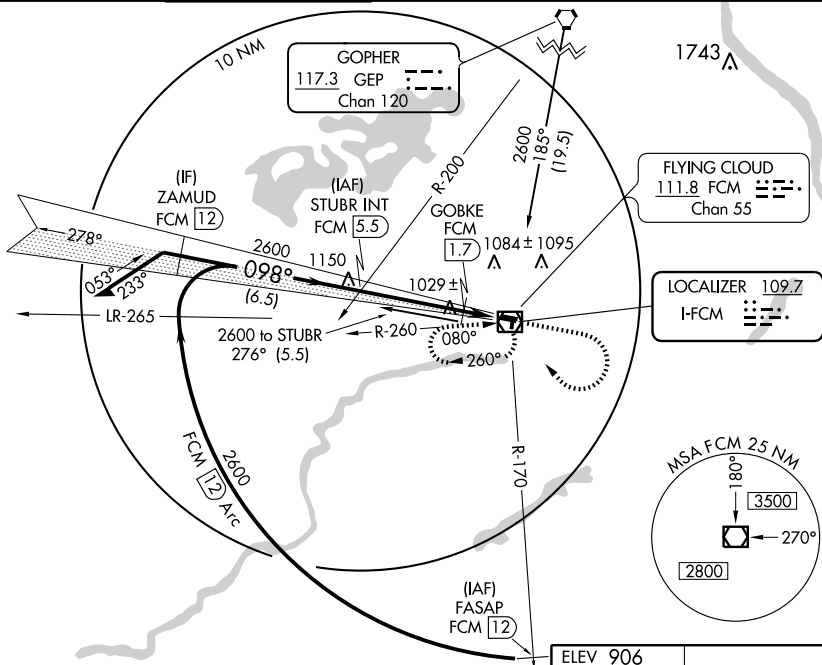
LOC I-FCM	APP CRS	Rwy Idg	5000
<u>109.7</u>	098°	TDZE	906
		Apt Elev	906

ILS or LOC RWY 10R
MINNEAPOLIS/ FLYING CLOUD (FCM)

MALSR

MISSED APPROACH: Climb to 1800 then climbing right turn to 2600 direct FCM VOR/DME and hold.

ATIS 124.9	MINNEAPOLIS APP CON 134.7 284.7	FLYING CLOUD TOWER ★ 118.1 (CTAF) 0	GND CON 121.7	CLNC DEL 121.7	MINNEAPOLIS CLNC DEL 121.7 (When tower closed)	UNICOM 122.95
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CATEGORY	A	B	C	D
S-ILS 10R	1106- $\frac{1}{2}$ 200 (200- $\frac{1}{2}$)			
S-LOC 10R	1340- $\frac{1}{2}$ 434 (500- $\frac{1}{2}$)	1340- $\frac{3}{4}$ 434 (500- $\frac{3}{4}$)	1340-1 434 (500-1)	
CIRCLING	1340-1 434 (500-1)	1360-1 454 (500-1)	1360-1 $\frac{1}{2}$ 454 (500-1 $\frac{1}{2}$)	1460-2 554 (600-2)
DME MINIMUMS				
S-LOC 10R	1280- $\frac{1}{2}$ 374 (400- $\frac{1}{2}$)			1280- $\frac{3}{4}$ 374 (400- $\frac{3}{4}$)
CIRCLING	1320-1 414 (500-1)	1360-1 454 (500-1)	1360-1 $\frac{1}{2}$ 454 (500-1 $\frac{1}{2}$)	1460-2 554 (600-2)

REIL Rwy 18, 28L, and 36 **L**
 MIRL Rwy 10L-28R and 18-36 **L**
 HIRL Rwy 10R-28L **L**

FAF to MAP 5 NM					
Knots	60	90	120	150	180
Min:Sec	5:00	3:20	2:30	2:00	1:40

KBREW TWO DEPARTURE

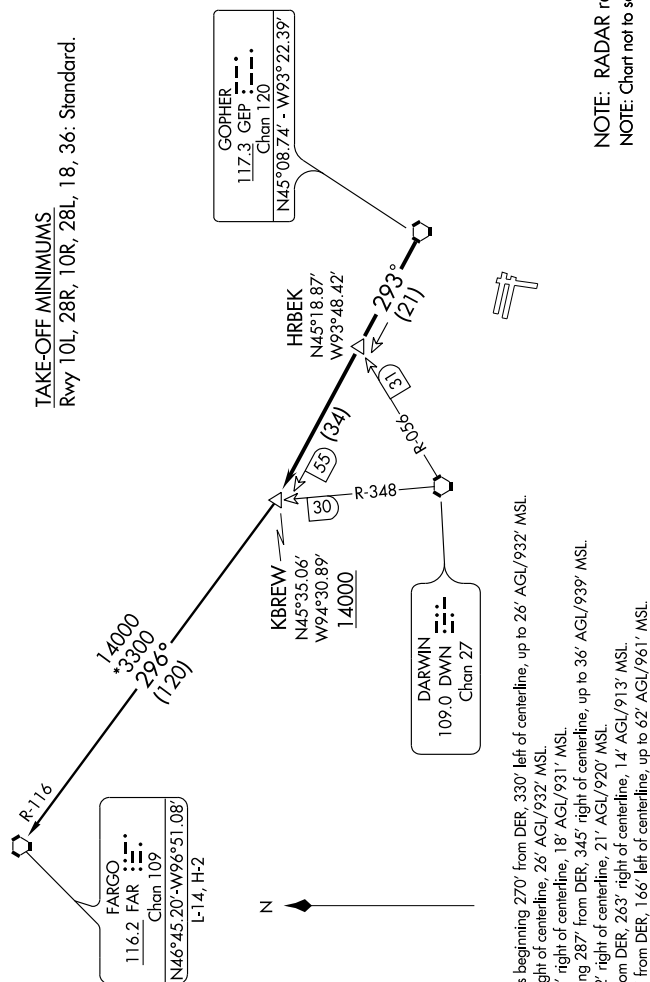
SL-5094 (FAA)

MINNEAPOLIS/ FLYING CLOUD (F'CM)
MINNEAPOLIS, MINNESOTA

ATIS 124.9
CLNC DEL
121.7
MINNEAPOLIS DEP CON
134.7 357.4

TAKE-OFF MINIMUMS

Rwy 10L, 28R, 10R, 28L, 18, 36: Standard.



NOTE: RADAR required.
NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Fly assigned heading and altitude for radar vectors to GEP VORTAC then via GEP R-293 to KBREW INT/ GEP 55 DME, thence via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

FARGO TRANSITION (KBREW2.FAR): From over KBREW INT via FAR R-116 to FAR VORTAC.

TAKE-OFF OBSTACLE NOTES

RWY 10L: Multiple antennas on hangars beginning 270' from DER, 330' left of centerline, up to 26' AGL/932' MSL.

Tree 682' from DER, 668' right of centerline, 26' AGL/932' MSL.

RWY 28R: Hangar 259' from DER, 355' right of centerline, 18' AGL/931' MSL.

RWY 10R: Multiple OL on poles beginning 287' from DER, 345' right of centerline, up to 36' AGL/939' MSL.

Hangar 150' from DER, 422' right of centerline, 21' AGL/920' MSL.

RWY 18: Antenna on building 536' from DER, 263' right of centerline, 14' AGL/913' MSL.

Multiple trees beginning 338' from DER, 166' left of centerline, up to 62' AGL/961' MSL.

OL on fence 176' from DER, 127' left of centerline, 10' AGL/910' MSL.

Vehicle and road 198' from DER, 196' left of centerline, 15' AGL/918' MSL.

Floodlight 148' from DER, 374' right of centerline, 38' AGL/938' MSL.

OL on hangar 282' from DER, 317' right of centerline, 37' AGL/937' MSL.

RWY 36: Wind vane 923' from DER, 404' left of centerline, 61' AGL/960' MSL.

Vent on building 943' from DER, 295' left of centerline, 44' AGL/943' MSL.

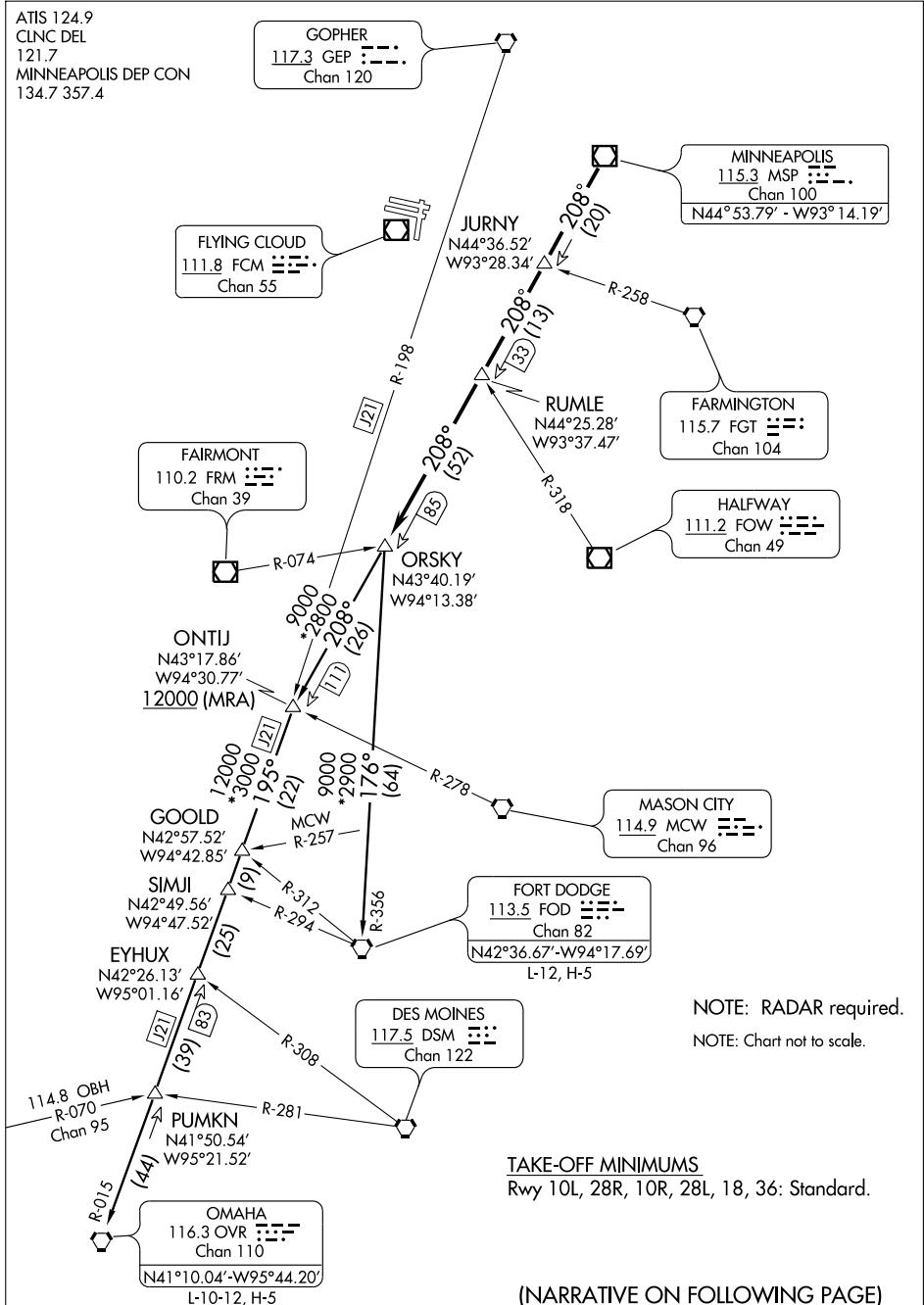
Pole 714' from DER, 351' left of centerline, 33' AGL/932' MSL.

Multiple trees beginning 504' from DER, 324' right of centerline,

up to 67' AGL/966' MSL.

ORSKY THREE DEPARTURE

SL-5094 (FAA)

MINNEAPOLIS/FLYING CLOUD (FCM)
MINNEAPOLIS, MINNESOTA



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Fly assigned heading and altitude for radar vectors to MSP VOR/DME then via MSP R-208 to ORSKY INT/MSP 85 DME, thence via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

FORT DODGE TRANSITION (ORSKY3.FOD): From over ORSKY INT via FOD R-356 to FOD VORTAC.

OMAHA TRANSITION (ORSKY3.OVR): From over ORSKY INT via MSP R-208 to ONTJ INT then via OVR R-015 to OVR VORTAC.

TAKE-OFF OBSTACLE NOTES

- RWY 10L: Multiple antennas on hangars beginning 270' from DER, 330' left of centerline, up to 26' AGL/932' MSL.
Tree 682' from DER, 668' right of centerline, 26' AGL/932' MSL.
- RWY 28R: Hangar 259' from DER, 355' right of centerline, 18' AGL/931' MSL.
- RWY 10R: Multiple OL on poles beginning 287' from DER, 345' right of centerline, up to 36' AGL/939' MSL.
Hangar 150' from DER, 422' right of centerline, 21' AGL/920' MSL.
Antenna on building 536' from DER, 263' right of centerline, 14' AGL/913' MSL.
- RWY 18: Multiple trees beginning 338' from DER, 166' left of centerline, up to 62' AGL/961' MSL.
OL on fence 176' from DER, 127' left of centerline, 10' AGL/910' MSL.
Vehicle and road 198' from DER, 196' left of centerline, 15' AGL/918' MSL.
Floodlight 148' from DER, 374' right of centerline, 38' AGL/938' MSL.
OL on hangar 282' from DER, 317' right of centerline, 37' AGL/937' MSL.
- RWY 36: Wind vane 923' from DER, 404' left of centerline, 61' AGL/960' MSL.
Vent on building 943' from DER, 295' left of centerline, 44' AGL/943' MSL.
Pole 714' from DER, 351' left of centerline, 33' AGL/932' MSL.
Multiple trees beginning 504' from DER, 324' right of centerline, up to 67' AGL/966' MSL.

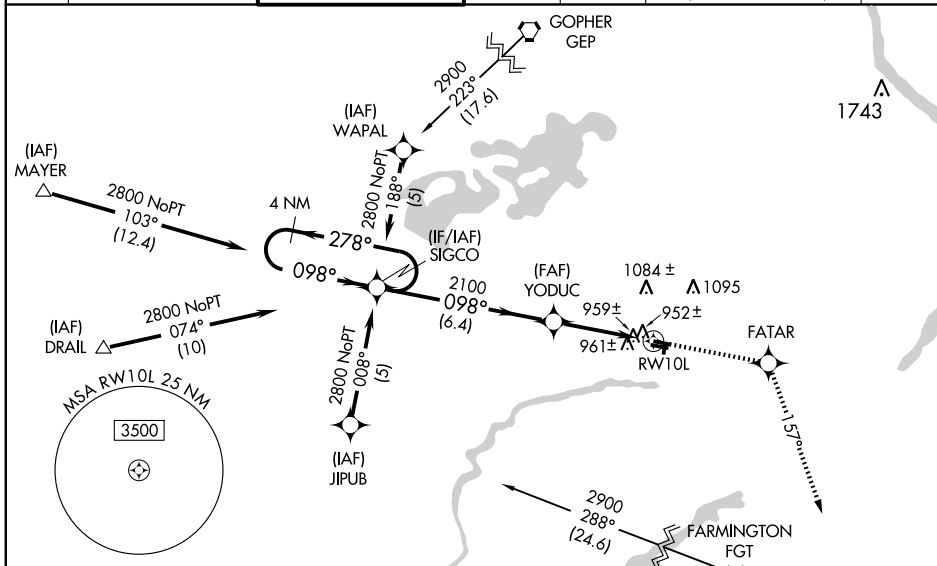
WAAS CH 42510 W10A	APP CRS 098°	Rwy Idg 3900 TDZE 905 Apt Elev 906
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RNAV (GPS) RWY 10L
FLYING CLOUD (FCM)

Baro-VNAV NA when using Minneapolis-St. Paul Intl/Wold Chamberlain altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 46°C (114°F). DME/DME RNP -0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Minneapolis-St. Paul Intl/Wold Chamberlain altimeter setting and increase all DA 34 feet and all MDA 40 feet and LNAV Cat D visibility ¼ mile.

Climb to 2900 direct FATAR and via 157° track to ONARE and hold.

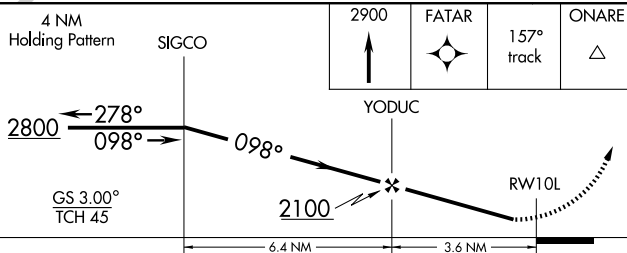
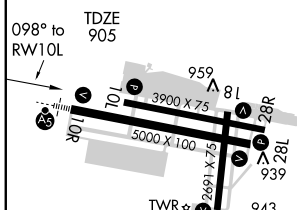
ATIS 124.9	MINNEAPOLIS APP CON 134.7 284.7	FLYING CLOUD TOWER ★ 118.1 (CTAF) ①	GND CON 121.7	CLNC DEL 121.7	MINNEAPOLIS CLNC DEL 121.7 (When tower closed)	UNICOM 122.95
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NC-1. 17 DEC 2009 to 14 JAN 2010

ELEV 906

Procedure NA for arrivals on FGT VORTAC airway radials 258 CW 339, GEP VORTAC airway radials 182 CW 260, and at DRAIL on V412 westbound.



CATEGORY	A	B	C	D
LPV DA		1186-1	281 (300-1)	
RNAV/DA		1229-1½	324 (400-1½)	
RNAV MDA		1240-1	335 (400-1)	
CIRCLING	1300-1 394 (400-1)	1360-1 454 (500-1)	1360-1½ 454 (500-1½)	1460-2 554 (600-2)

REIL Rwys 18, 28L, and 36 **L**
MIRL Rwys 10L-28R and 18-36 **L**
HIRL Rwy 10R-28L **L**

APP CRS 278°	Rwy Idg TDZE Apt Elev	5000 906 906
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RNAV (GPS) RWY 28L

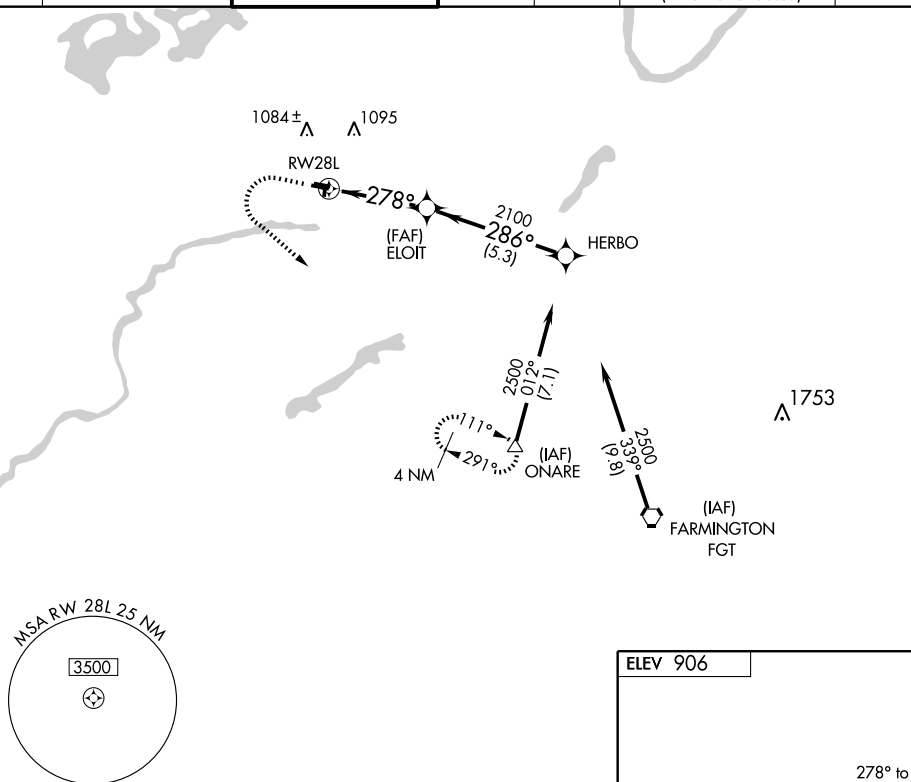
MINNEAPOLIS/FLYING CLOUD (FCM)



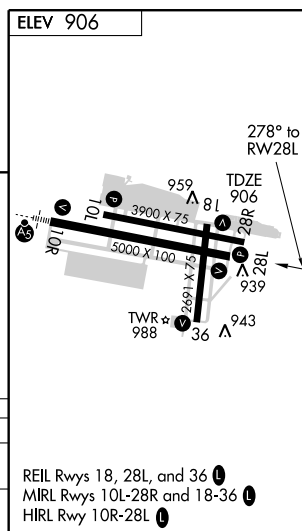
GPS or RNP- 0.3 required. DME/DME RNP- 0.3 NA.

MISSED APPROACH: Climb to 1 500 then climbing left turn to 3000 direct ONARE WP and hold.

ATIS 124.9	MINNEAPOLIS APP CON 134.7 284.7	FLYING CLOUD TOWER ★ 118.1 (CTAF) 0	GND CON 121.7	CLNC DEL 121.7	MINNEAPOLIS CLNC DEL 121.7 (When tower closed)	UNICOM 122.95
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1500 ↑	3000 ↘	ONARE △				
CATEGORY	A		B		C	D
RNAV MDA	1280-1		374 (400-1)		1280-1¼ 374 (400-1¼)	
CIRCLING	1320-1 414 (500-1)	1360-1 454 (500-1)	1360-1½ 454 (500-1½)		1460-2 554 (600-2)	



WAAS CH 99709 W28A	APP CRS 278°	Rwy Idg 3900 TDZE 900 Apt Elev 906
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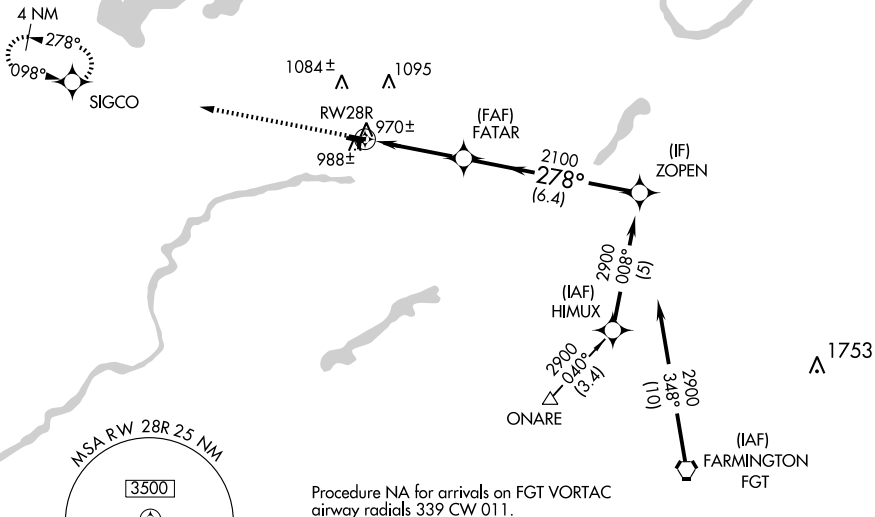
RNAV (GPS) RWY 28R

MINNEAPOLIS/FLYING CLOUD (FCM)

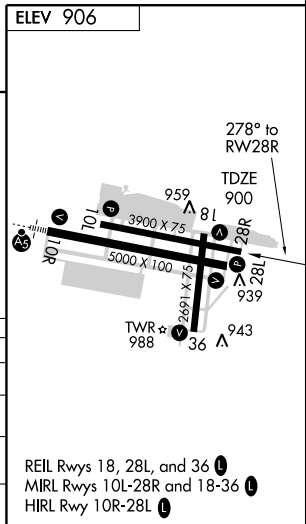
DME/DME RNP -0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Minneapolis-St. Paul Intl/Wold Chamberlain altimeter setting and increase all DA 34 feet and all MDA 40 feet and LNAV Cat D visibility 1/4 mile. Baro-VNAV NA when using Minneapolis-St. Paul Intl/Wold Chamberlain altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16° C (4°F) or above 46°C (114°F).

MISSED APPROACH: Climb to 2900 direct SIGCO and hold.

ATIS 124.9	MINNEAPOLIS APP CON 134.7 284.7	FLYING CLOUD TOWER ★ 118.1 (CTAF) 0	GND CON 121.7	CLNC DEL 121.7	MINNEAPOLIS CLNC DEL 121.7 (When tower closed)	UNICOM 122.95
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Procedure NA for arrivals on FGT VORTAC
airway radials 339 CW 011.



APP CRS	Rwy Idg	2691
003°	TDZE	905
	Apt Elev	906

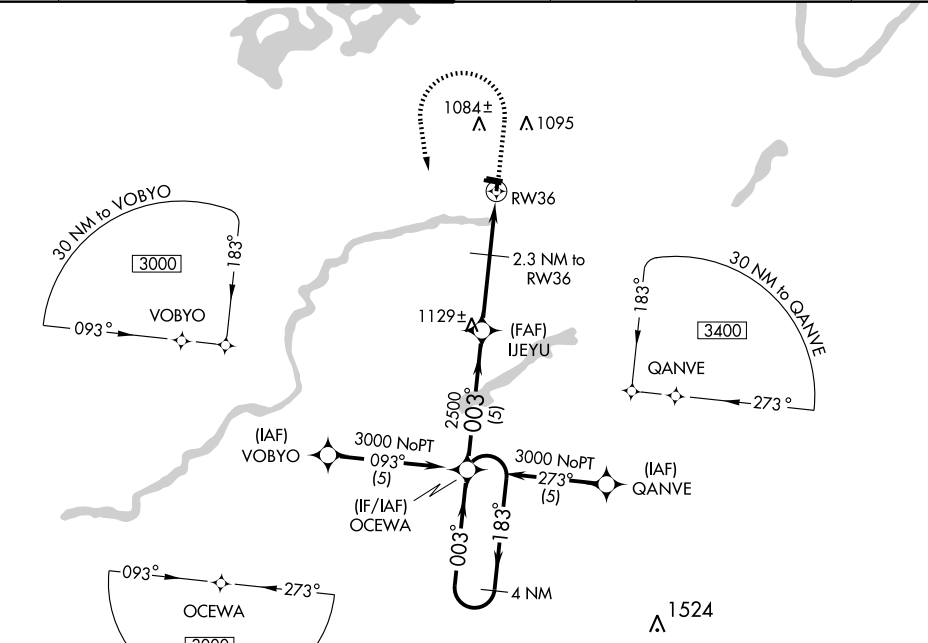
RNAV (GPS) RWY 36

MINNEAPOLIS/ FLYING CLOUD (FCM)

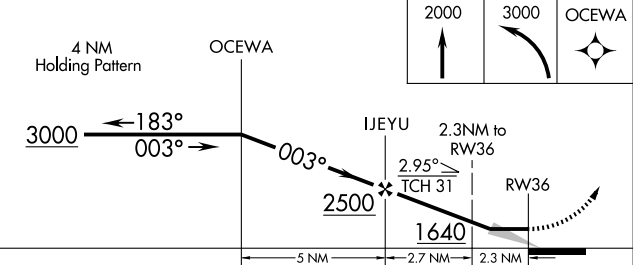
NA GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 2000 then climbing left turn to 3000 direct OCEWA WP and hold.

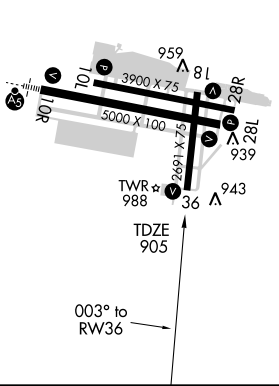
ATIS 124.9	MINNEAPOLIS APP CON 134.7 284.7	FLYING CLOUD TOWER ★ 118.1 (CTAF) 0	GND CON 121.7	CLNC DEL 121.7	MINNEAPOLIS CLNC DEL 121.7 (When tower closed)	UNICOM 122.95
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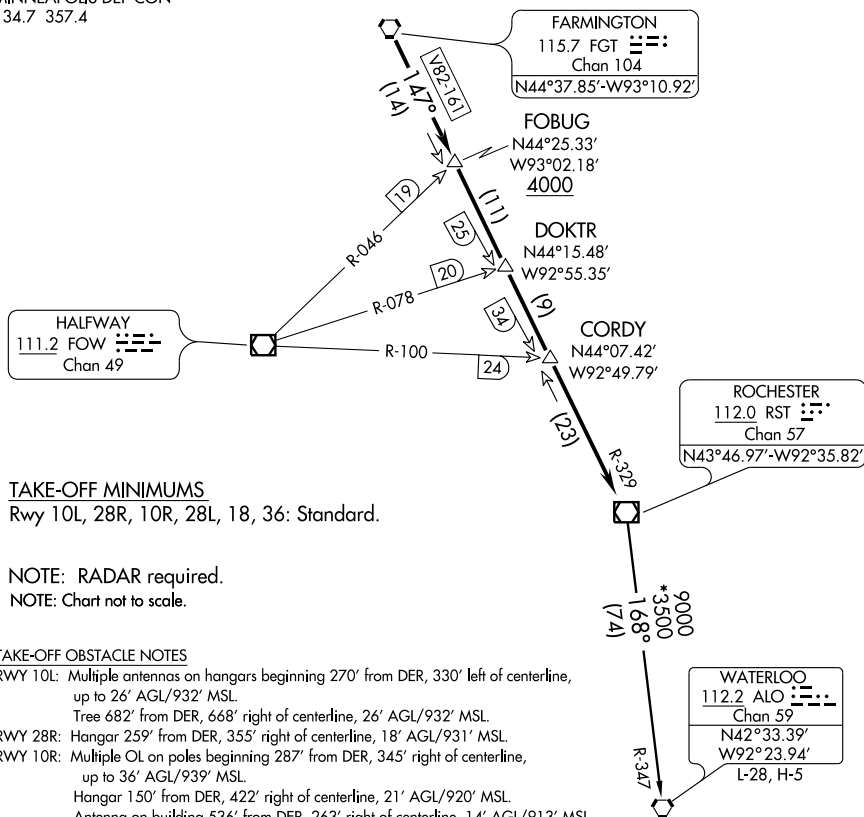
ELEV 906
REIL Rwy 18, 28L, and 36
MIRL Rwy 10L-28R and 18-36
HIRL Rwy 10R-28L



CATEGORY	A	B	C	D
RNAV MDA	1240-1	335 (400-1)		NA
CIRCLING	1320-1 414 (500-1)	1360-1 454 (500-1)	1360-1½ 454 (500-1½)	NA



ATIS 124.9
CLNC DEL
121.7
MINNEAPOLIS DEP CON
134.7 357.4

TAKE-OFF MINIMUMS

Rwy 10L, 28R, 10R, 28L, 18, 36: Standard.

NOTE: RADAR required.

NOTE: Chart not to scale.

TAKE-OFF OBSTACLE NOTES

RWY 10L: Multiple antennas on hangars beginning 270' from DER, 330' left of centerline, up to 26' AGL/932' MSL.

Tree 682' from DER, 668' right of centerline, 26' AGL/932' MSL.

RWY 28R: Hangar 259' from DER, 355' right of centerline, 18' AGL/931' MSL.

RWY 10R: Multiple OL on poles beginning 287' from DER, 345' right of centerline, up to 36' AGL/939' MSL.

Hangar 150' from DER, 422' right of centerline, 21' AGL/920' MSL.

Antenna on building 536' from DER, 263' right of centerline, 14' AGL/913' MSL.

RWY 18: Multiple trees beginning 338' from DER, 166' left of centerline, up to 62' AGL/961' MSL.

OL on fence 176' from DER, 127' left of centerline, 10' AGL/910' MSL.

Vehicle and road 198' from DER, 196' left of centerline, 15' AGL/918' MSL.

Floodlight 148' from DER, 374' right of centerline, 38' AGL/938' MSL.

OL on hangar 282' from DER, 317' right of centerline, 37' AGL/937' MSL.

RWY 36: Wind vane 923' from DER, 404' left of centerline, 61' AGL/960' MSL.

Vent on building 943' from DER, 295' left of centerline, 44' AGL/943' MSL.

Pole 714' from DER, 351' left of centerline, 33' AGL/932' MSL.

Multiple trees beginning 504' from DER, 324' right of centerline, up to 67' AGL/966' MSL.

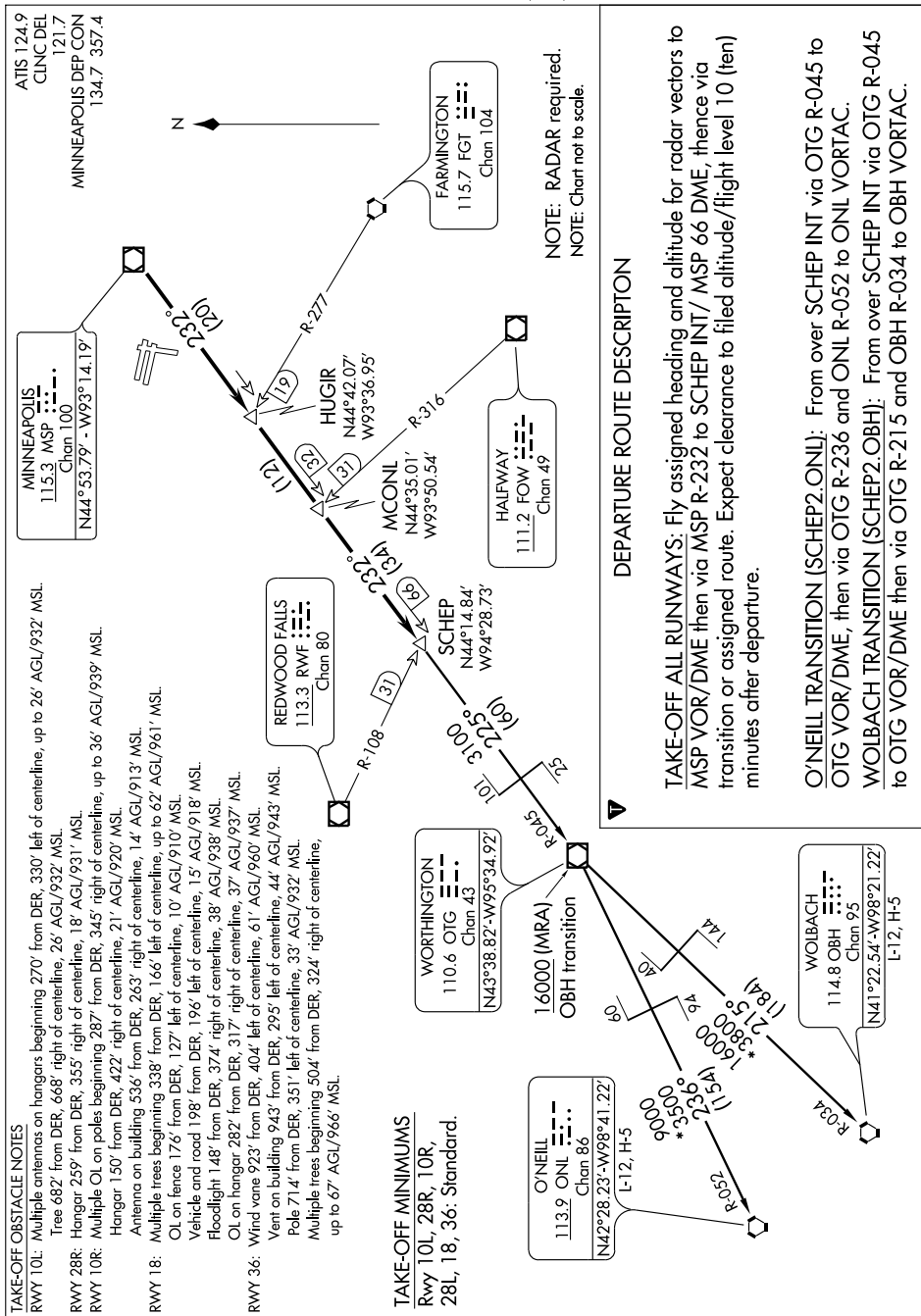
DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Fly assigned heading and altitude for radar vectors to FGT VORTAC then via FGT R-147 and RST R-329 to RST VOR/DME. Cross FOBUG INT/FGT 14 DME at or above 4000, thence via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

WATERLOO TRANSITION (RST3.ALO): From over RST VOR/DME via RST R-168 and ALO R-347 to ALO VORTAC.

SCHEP TWO DEPARTURE

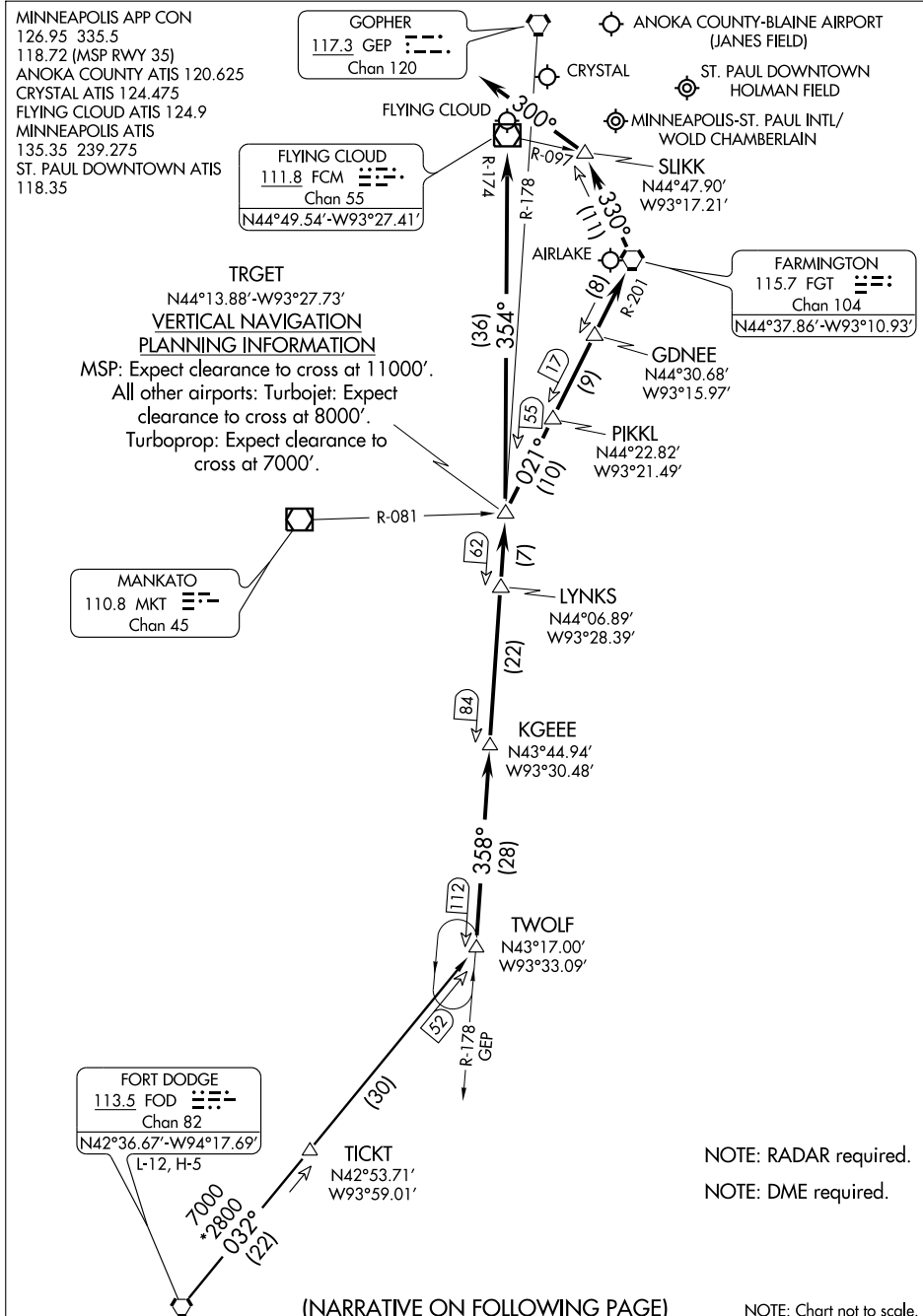
SL-5094 (FAA)

MINNEAPOLIS/ FLYING CLOUD (F'CM)
MINNEAPOLIS, MINNESOTA

TWOLF ONE ARRIVAL

ST-264 (FAA)

MINNEAPOLIS, MINNESOTA



ARRIVAL DESCRIPTION

FORT DODGE TRANSITION (FOD.TWOLF1): From over FOD VORTAC via FOD R-032 to TWOLF. Thence....

....From over TWOLF via GEP R-178 to KGEER, then via GEP R-178 to TRGET INT, then via FGT R-201 to FGT VORTAC. Thence....

LANDING MSP RWYS 12L/R: From over FGT VORTAC via FGT R-330 to SLIKK, thence via 300° heading for radar vectors to final approach course.

LANDING MSP RWYS 30L/R, 4, 22, 17, 35: Via radar vectors to final approach course.

ALL OTHER AIRPORTS: From over TRGET INT via FCM VOR/DME R-174 to FCM VOR/DME then expect radar vectors to final approach course.

For inoperative MALSR increase S-10R DME MINIMUMS
Cat D visibility to 1¼ mile.

MALSR

MISSED APPROACH: Climb to 1800 then right
turn to 2600 direct FCM VOR/DME and hold.

ATIS
124.9

MINNEAPOLIS APP CON
134.7 284.7

FLYING CLOUD TOWER *
118.1 (CTAF) 0

GND CON
121.7

CLNC DEL
121.7

MINNEAPOLIS CLNC DEL
121.7
(When tower closed)

UNICOM
122.95

10 NM

(IAF) STUBR INT FCM 5.5

2600 NoPT 096° 1150 (6.5)

2600 to Stubr 276° (5.5)

FCM 2 1084±

1743

GOPHER 117.3 GEP --- Chan 120

FLYING CLOUD 111.8 FCM --- Chan 55

MSA FCM 25 NM

ELEV 906

Remain within 10 NM

STUBR INT FCM 5.5

1800 2600 FCM 111.8

2600 096° 2600 096°

3.10° TCH 41

1360

FCM 2 FCM 1.5

0.5 1.1 NM

CATEGORY	A	B	C	D
S-10R	1360-½ 454 (500-½)		1360-¾ 454 (500-¾)	1360-1 454 (500-1)
CIRCLING	1360-1 454 (500-1)		1360-1½ 454 (500-1½)	1460-2 554 (600-2)
DME MINIMUMS				
S-10R	1280-½ 374 (400-½)			1280-1 374 (400-1)
CIRCLING	1320-1 414 (500-1)	1360-1 454 (500-1)	1360-1½ 454 (500-1½)	1460-2 554 (600-2)

TDZE 906

959 81 28R 28L 939 943 36

3900 X 75 5000 X 100 2691 X 75

096° 5 NM from FAF

TWR 988

REIL Rwy 18, 28L, and 36

MIRL Rwy 10L-28R and 18-36

HIRL Rwy 10R-28L

FAF to MAP 5 NM				
Knots	60	90	120	150 180
Min:Sec	5:00	3:20	2:30	2:00 1:40

NC-1. 17 DEC 2009 to 14 JAN 2010

VOR RWY 36

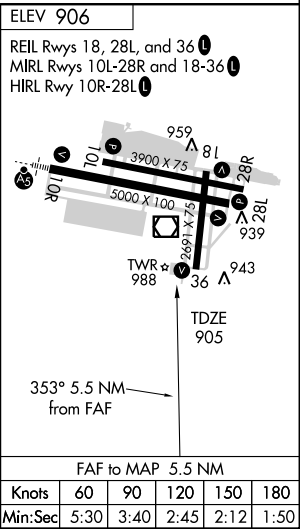
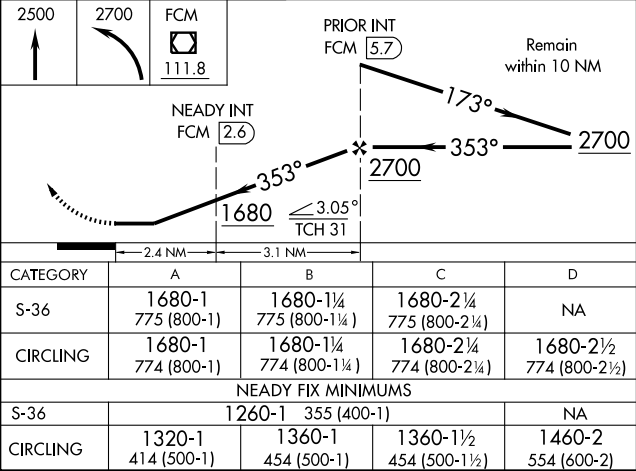
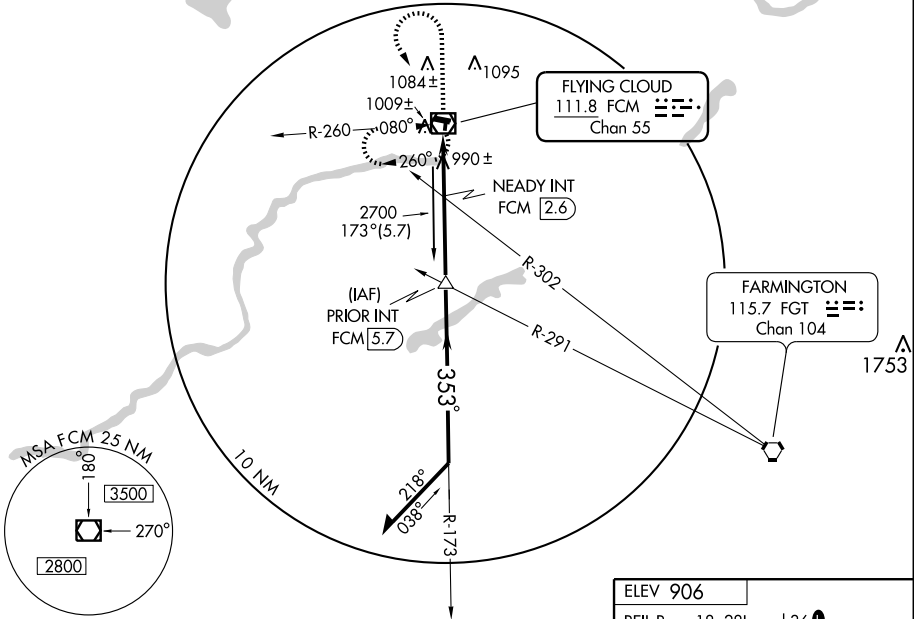
MINNEAPOLIS/ FLYING CLOUD (FCM)

VOR/DME FCM	APP CRS	Rwy Idg TDZE	2691 905 906
111.8	353°	Apt Elev	
Chan 55			

MISSED APPROACH: Climb to 2500 then climbing left turn to 2700 direct FCM VOR/DME and hold.

ATIS	MINNEAPOLIS APP CON	FLYING CLOUD TOWER *	GND CON	CLNC DEL	MINNEAPOLIS CLNC DEL	UNICOM
124.9	134.7 284.7	118.1 (CTAF) 0	121.7	121.7	121.7 (When tower closed)	122.95

DME or RADAR REQUIRED



WAUKON TWO DEPARTURE

SL-5094 (FAA)

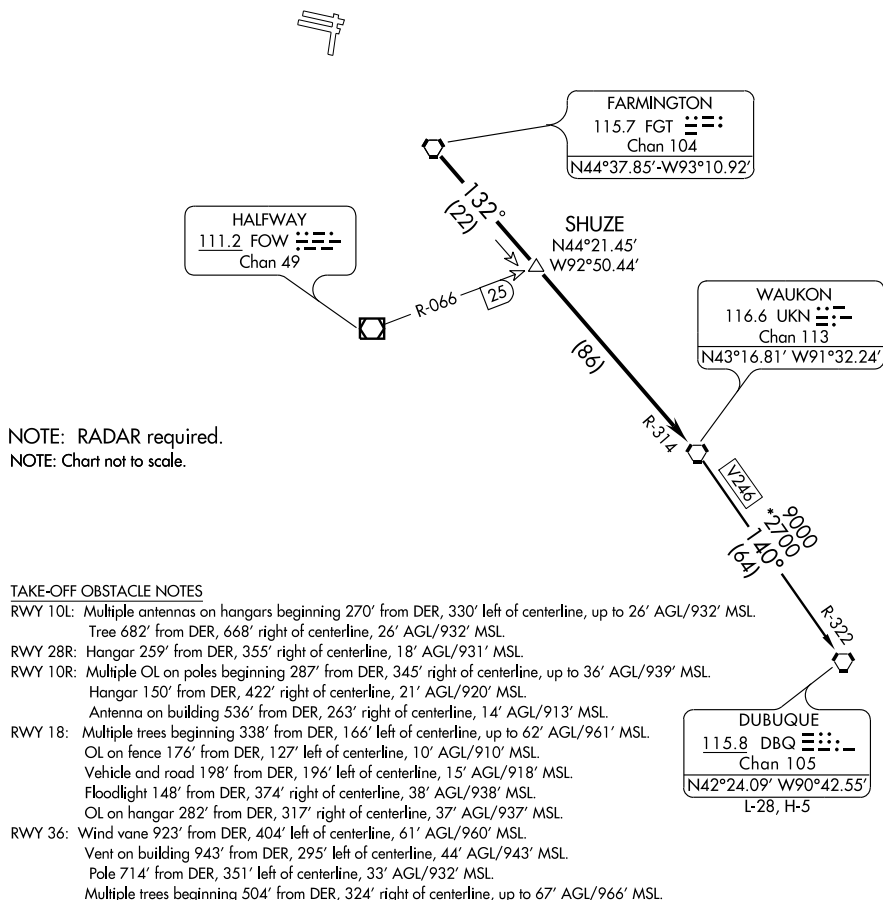
MINNEAPOLIS/ FLYING CLOUD (FCM)

MINNEAPOLIS, MINNESOTA

ATIS 124.9
CLNC DEL
121.7
MINNEAPOLIS DEP CON
134.7 357.4

TAKE-OFF MINIMUMS

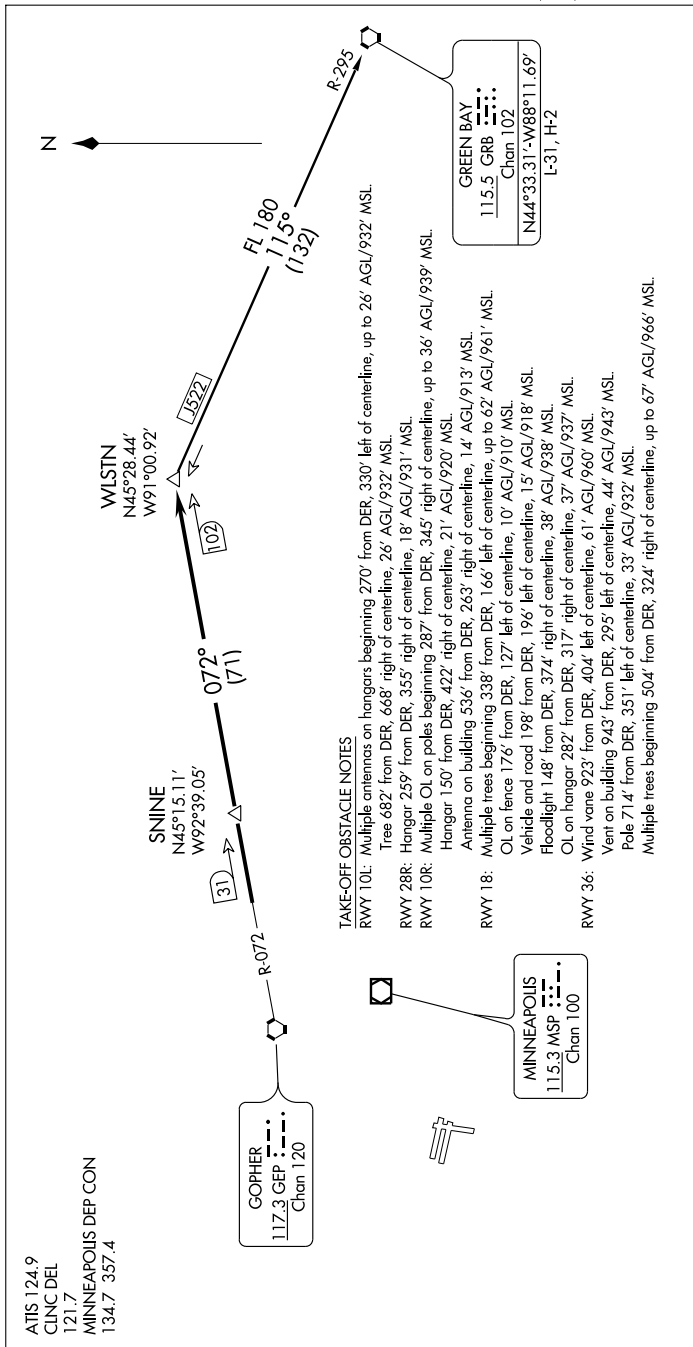
Rwy 10L, 28R, 10R, 28L, 18, 36: Standard.



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Fly assigned heading and altitude for radar vectors to FGT VORTAC then via FGT R-132 and UKN R-314 to UKN VORTAC, thence via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

DUBUQUE TRANSITION (UKN2.DBQ): From over UKN VORTAC via UKN R-140 and DBQ R-322 to UKN VORTAC.



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Fly assigned heading and altitude for radar vectors to GEP R-072 to WLSTN/ GEP 102 DME, thence via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

GREEN BAY TRANSITION (WLSTN2.GRB): From over WLSTN INT via GRB R-295 to GRB VORTAC.

TAKE-OFF MINIMUMS

Rwy 10L, 28R, 10R, 28L, 18, 36: Standard.

NOTE: RADAR and DME required.

NOTE: Chart not to scale.

ZMBRO TWO DEPARTURE

SL-5094 (FAA)

MINNEAPOLIS/ FLYING CLOUD (F'CM)
MINNEAPOLIS, MINNESOTA

TAKE-OFF OBSTACLE NOTES

- RWY 10L: Multiple antennas on hangars beginning 270' from DER, 330' left of centerline, up to 26' AGL/932' MSL.
Tree 682' from DER, 668' right of centerline, 26' AGL/932' MSL.
RWY 28R: Hangar 259' from DER, 355' right of centerline, 18' AGL/931' MSL.
RWY 10R: Multiple OL on poles beginning 287' from DER, 345' right of centerline, up to 36' AGL/939' MSL.
RWY 18: Hangar 150' from DER, 422' right of centerline, 21' AGL/920' MSL.
Antenna on building 536' from DER, 263' right of centerline, 14' AGL/913' MSL.
Multiple trees beginning 338' from DER, 166' left of centerline, up to 62' AGL/961' MSL.
OL on fence 176' from DER, 127' left of centerline, 10' AGL/910' MSL.
Vehicle and road 198' from DER, 196' left of centerline, 15' AGL/918' MSL.
Floodlight 148' from DER, 374' right of centerline, 38' AGL/938' MSL.
OL on hangar 282' from DER, 317' right of centerline, 37' AGL/937' MSL.
RWY 36: Wind vane 923' from DER, 404' left of centerline, 61' AGL/960' MSL.
Vent on building 943' from DER, 295' left of centerline, 44' AGL/943' MSL.
Pole 714' from DER, 351' left of centerline, 33' AGL/932' MSL.
Multiple trees beginning 504' from DER, 324' right of centerline, up to 67' AGL/966' MSL.

MINNEAPOLIS
115.3 MSP
Chan 100
N44°53.79' - W93°14.19'



ATIS 124.9
CLNC DEL
121.7
MINNEAPOLIS DEP CON
134.7 357.4

N

JEDET
N44°27.68'
W92°43.68'

4000

121°
(14)

ZMBRO
N44°20.50'
W92°26.91'

32

34

R-006

R-006

R-006

R-006

R-006

R-006

R-006

R-006

R-006

R-006

R-006

R-006

R-006

R-006

R-006

R-006

R-006

R-006

R-006

R-006

R-006

R-006

R-006

R-006

R-006

R-006

R-006

R-006

R-006

HALFWAY
111.2 FOW
Chan 49

111.2

111.2

111.2

111.2

111.2

111.2

111.2

111.2

111.2

111.2

111.2

111.2

111.2

111.2

111.2

111.2

111.2

111.2

111.2

111.2

111.2

111.2

111.2

111.2

111.2

111.2

9000

2800

121°

(50)

121°

121°

121°

121°

121°

121°

121°

121°

121°

121°

121°

121°

121°

121°

121°

121°

121°

121°

121°

121°

121°

TAKE-OFF MINIMUMS

Rwy 10L, 28R, 10R, 28L, 18, 36: Standard.

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Fly assigned heading and altitude for radar vectors to MSP VOR/DME then via MSP R-138 to JEDET INT/ MSP 34 DME, at or above 4000; then via ODI R-301 to ZMBRO INT/ ODI 50 DME, thence via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

NODINE TRANSITION (ZMBRO2.ODI): From over ZMBRO INT via ODI R-301 to ODI VORTAC.

NOTE: RADAR required.

NOTE: Chart not to scale.

NC-1, 17 DEC 2009 to 14 JAN 2010

AGUDE ONE ARRIVAL

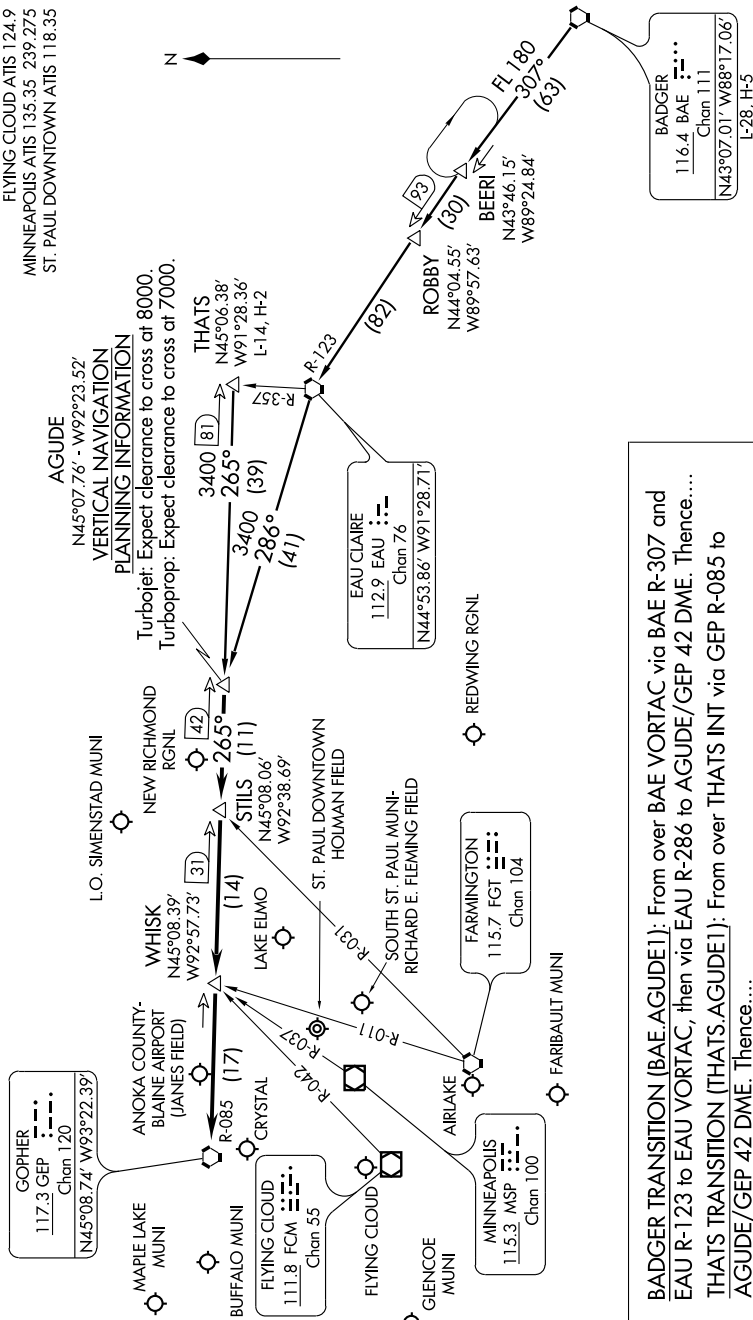
ST-263 (FAA)

MINNEAPOLIS-ST. PAUL, MINNESOTA

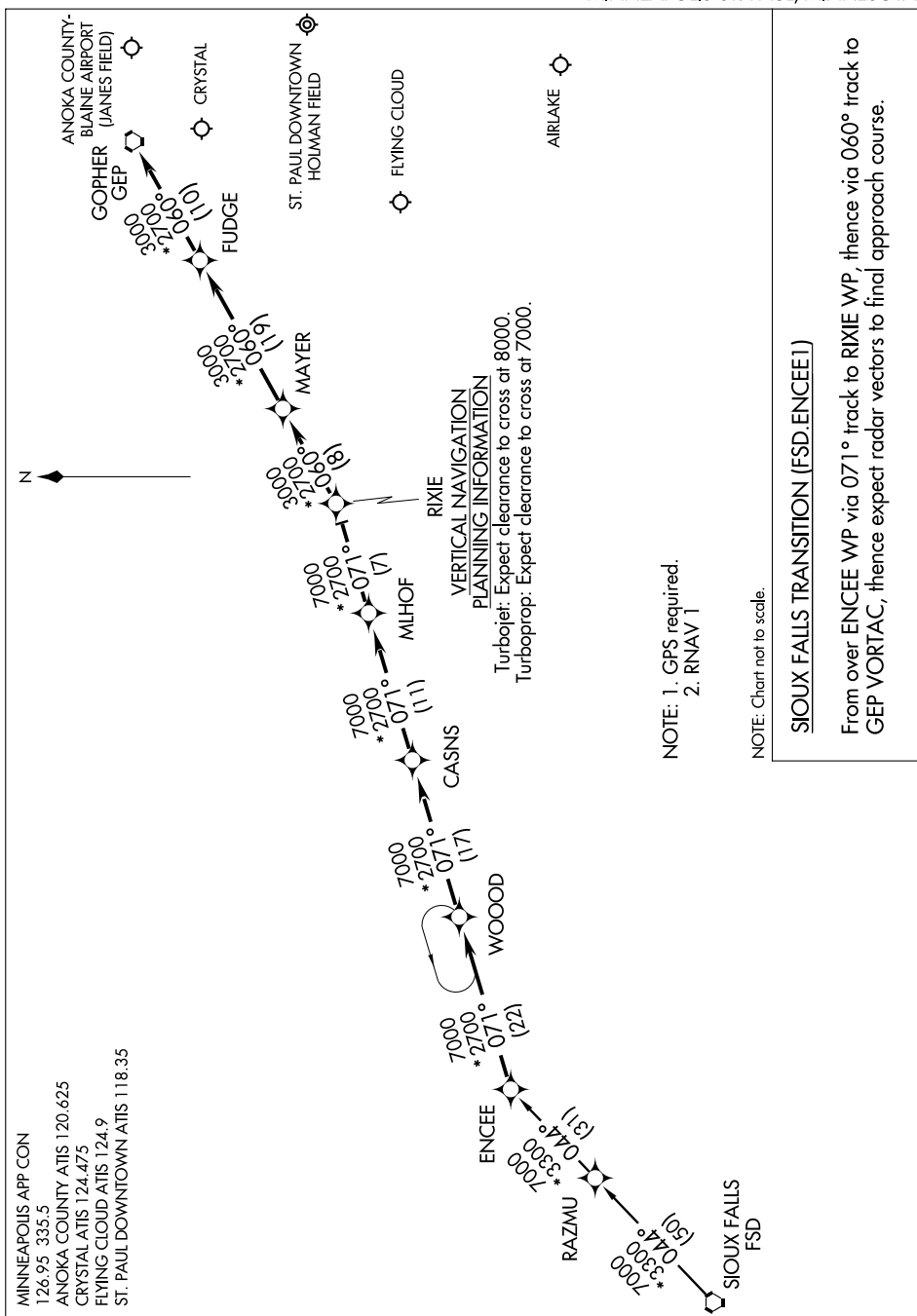
MINNEAPOLIS APP CON
126.95 335.5
ANOKA COUNTY ATIS 120.625
CRYSTAL ATIS 124.475
FLYING CLOUD ATIS 124.9
MINNEAPOLIS ATIS 135.35 239.275
ST. PAUL DOWNTOWN ATIS 118.35

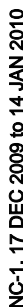
AGUDE
N45°07.76' - W92°23.52'
VERTICAL NAVIGATION
PLANNING INFORMATION

Turbopjet: Expect clearance to cross at 8000.
Turboprop: Expect clearance to cross at 7000.



BADGER TRANSITION [BAE AGUDE1]: From over BAE VORTAC via BAE R-307 and EAU R-123 to EAU VORTAC, then via EAU R-286 to AGUDE/GEF 42 DME. Thence....
THATS TRANSITION [THATS.AGUDE1]: From over THATS INT via GEP R-085 to AGUDE/GEF 42 DME. Thence....
....From over AGUDE/GEF 42 DME via the GEP R-085 to GEP VORTAC, then expect radar vector to final approach course.





LOC I-LVN	APP CRS	Rwy Idg	3706
108.9	294°	TDZE	958
		Apt Elev	960

⚠ NA

Inoperative table does not apply to S-ILS 30 and S-LOC 30 Cats A and B. For inoperative MALS, increase S-LOC Cat C visibility to 1¼ mile and Cat D visibility to 1½ mile.

MALS

MISSED APPROACH:

Climb to 1500 then climbing left turn to 2800 direct FGT VORTAC and hold.

AWOS-3	MINNEAPOLIS APP CON	CLNC DEL	UNICOM
118.0	134.7 284.7	118.95	123.0 (CTAF) 1

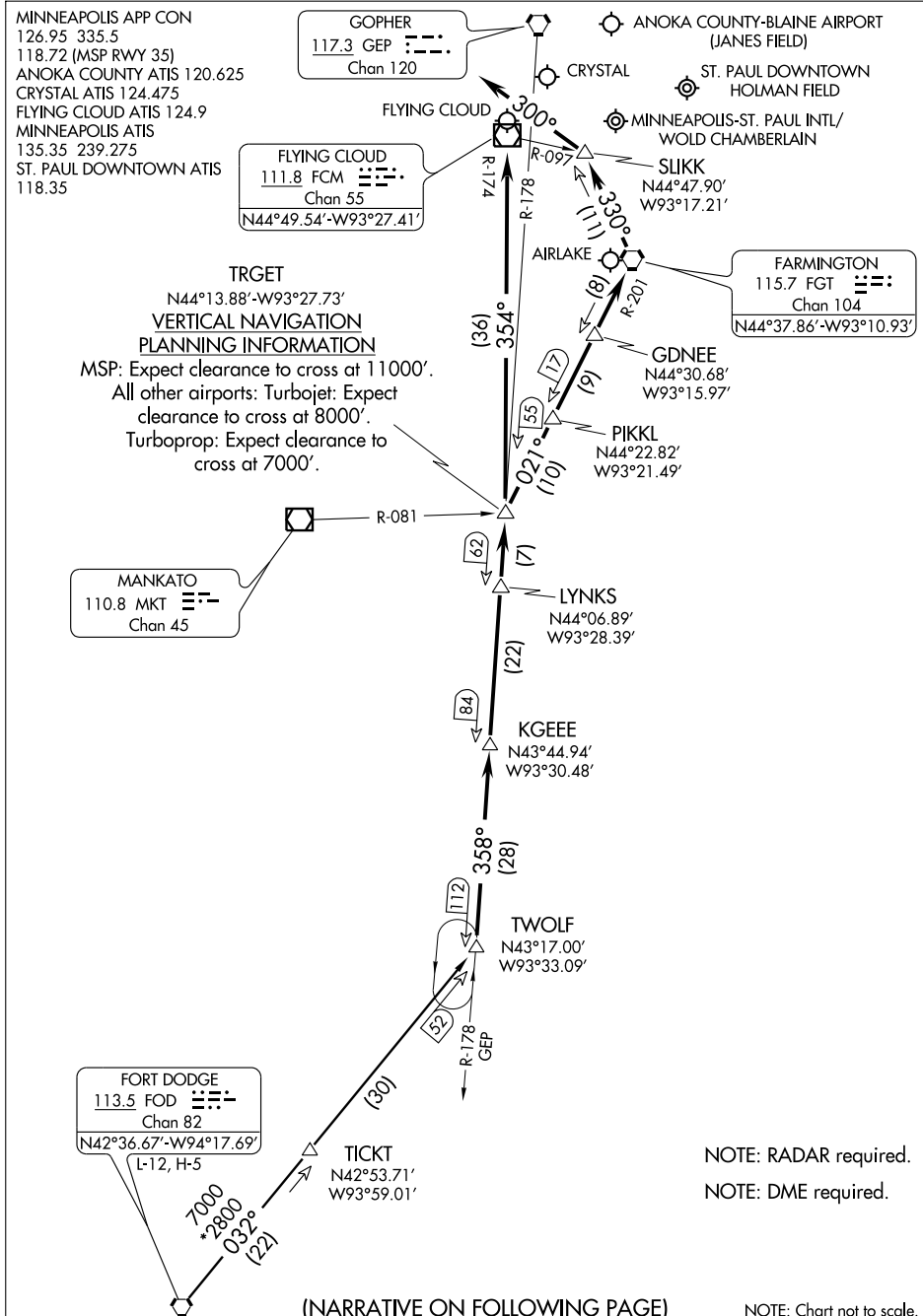
1500	2800	FGT		
			115.7	
LAAKE OM/INT				
2630				
114°				
294°				
2700				
*at Disp Thld, 52 at rwy end				
GS 3.00°				
TCH 31°				
5.1 NM				
CATEGORY	A	B	C	D
S-ILS 30	1208-1 250 (300-1)			
S-LOC 30	1400-1 442 (500-1)			
CIRCLING	1500-1 540 (600-1)	1500-1½ 540 (600-1½)	1520-2 560 (600-2)	

NC-1, 17 DEC 2009 to 14 JAN 2010

TWOLF ONE ARRIVAL

ST-264 (FAA)

MINNEAPOLIS, MINNESOTA



ARRIVAL DESCRIPTION

FORT DODGE TRANSITION (FOD.TWOLF1): From over FOD VORTAC via FOD R-032 to TWOLF. Thence....

....From over TWOLF via GEP R-178 to KGEFF, then via GEP R-178 to TRGET INT, then via FGT R-201 to FGT VORTAC. Thence....

LANDING MSP RWYS 12L/R: From over FGT VORTAC via FGT R-330 to SLIKK, thence via 300° heading for radar vectors to final approach course.

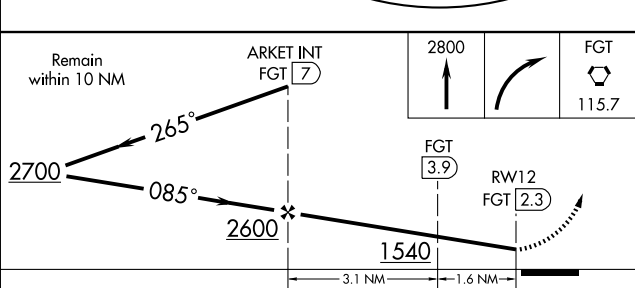
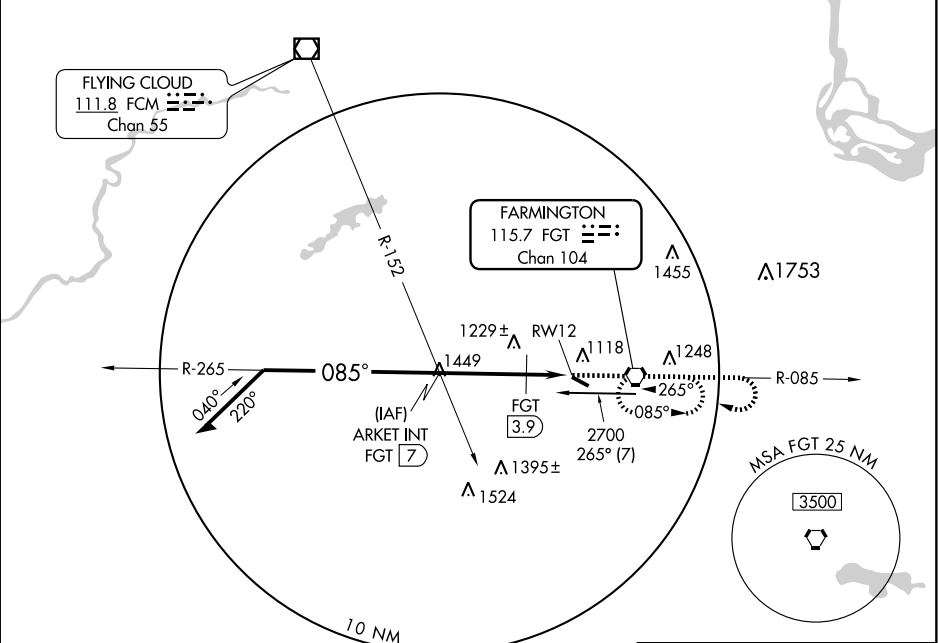
LANDING MSP RWYS 30L/R, 4, 22, 17, 35: Via radar vectors to final approach course.

ALL OTHER AIRPORTS: From over TRGET INT via FCM VOR/DME R-174 to FCM VOR/DME then expect radar vectors to final approach course.

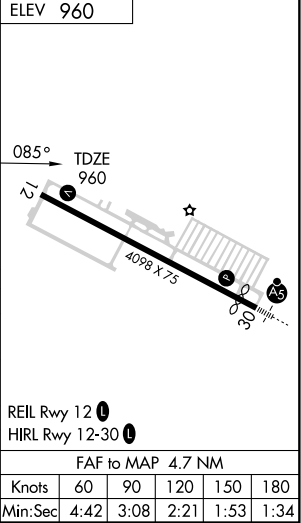
VORTAC FGT 115.7 Chan 104	APP CRS 085°	Rwy Idg TDZE 960 Apt Elev 960	4098 960 960
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VOR or GPS RWY 12
MINNEAPOLIS/AIRLAKE (LVN)

AWOS-3 118.0		MINNEAPOLIS APP CON 134.7 284.7	CLNC DEL 118.95	UNICOM 123.0 (CTAF) 1
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CATEGORY	A	B	C	D
S-12	1540-1	580 (600-1)	1540-1½ 580 (600-1½)	1540-1¾ 580 (600-1¾)
CIRCLING	1540-1	580 (600-1)	1540-1½ 580 (600-1½)	1540-2 580 (600-2)
DME MINIMUMS				
S-12	1440-1	480 (500-1)	1440-1¼ 480 (500-1¼)	1440-1½ 480 (500-1½)
CIRCLING	1500-1	540 (600-1)	1500-1½ 540 (600-1½)	1520-2 560 (600-2)



AGUDE ONE ARRIVAL

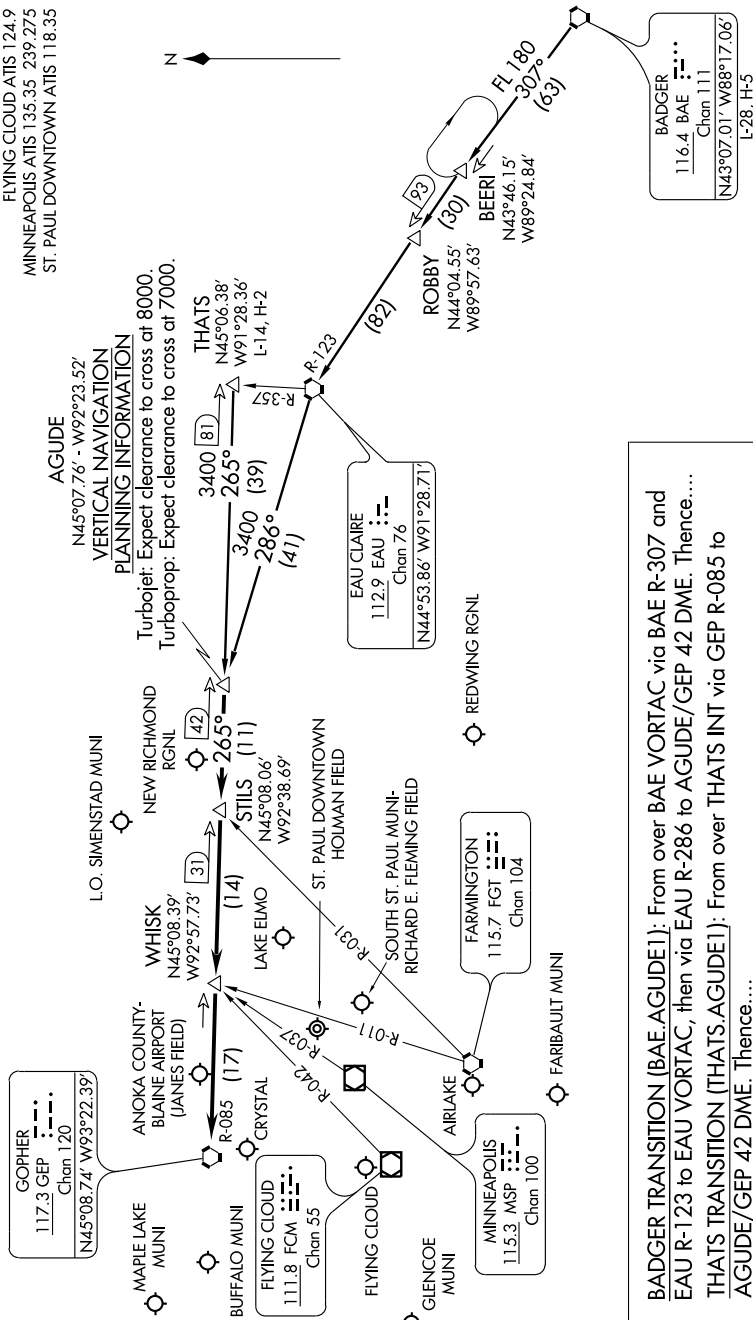
ST-263 (FAA)

MINNEAPOLIS-ST. PAUL, MINNESOTA

MINNEAPOLIS APP CON
126.95 335.5
ANOKA COUNTY ATIS 120.625
CRYSTAL ATIS 124.475
FLYING CLOUD ATIS 124.9
MINNEAPOLIS ATIS 135.35 239.275
ST. PAUL DOWNTOWN ATIS 118.35

AGUDE
N45°07.76' - W92°23.52'
VERTICAL NAVIGATION
PLANNING INFORMATION

Turbopjet: Expect clearance to cross at 8000.
Turboprop: Expect clearance to cross at 7000.



BADGER TRANSITION [BAE AGUDE1]: From over BAE VORTAC via BAE R-307 and EAU R-123 to EAU VORTAC, then via EAU R-286 to AGUDE/GEF 42 DME. Thence....
THATS TRANSITION [THATS.AGUDE1]: From over THATS INT via GEP R-085 to AGUDE/GEF 42 DME. Thence....
....From over AGUDE/GEF 42 DME via the GEP R-085 to GEP VORTAC, then expect radar vector to final approach course.

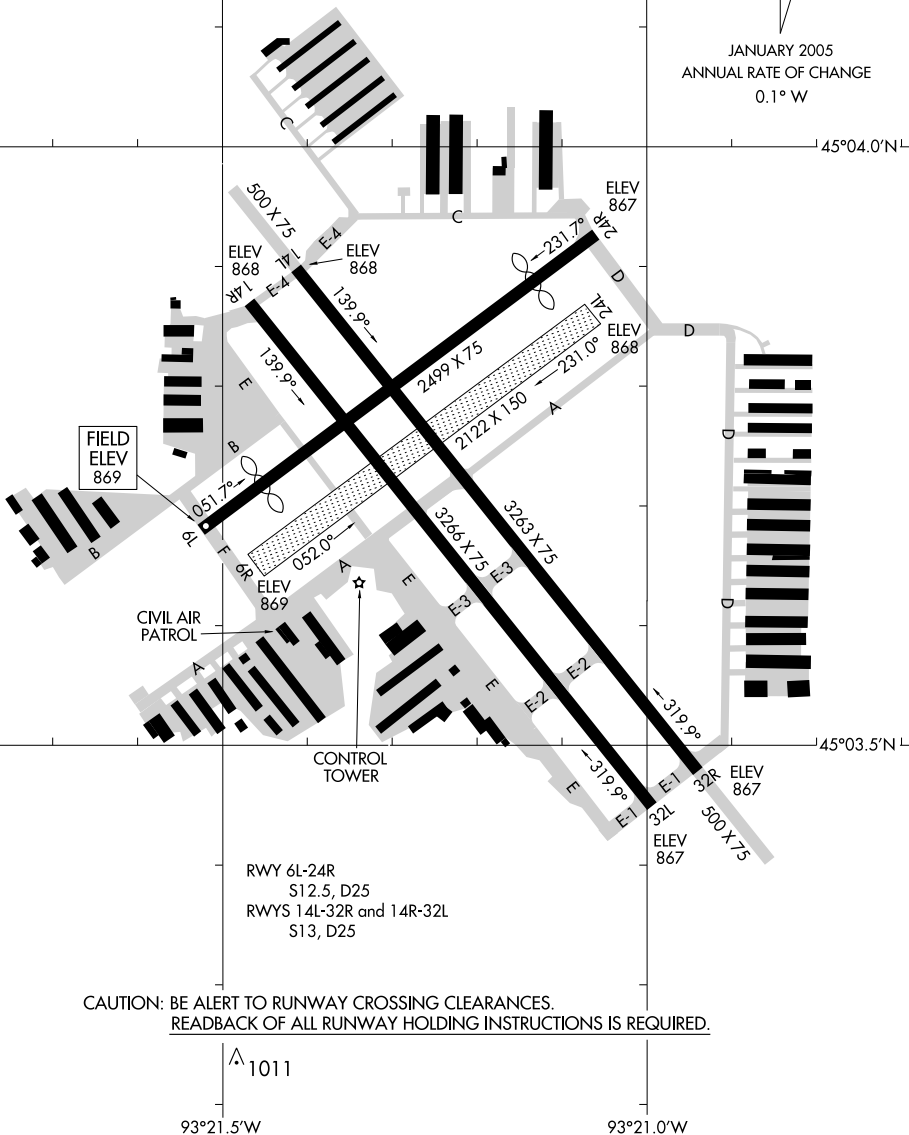
AIRPORT DIAGRAM

AL-5158 (FAA)

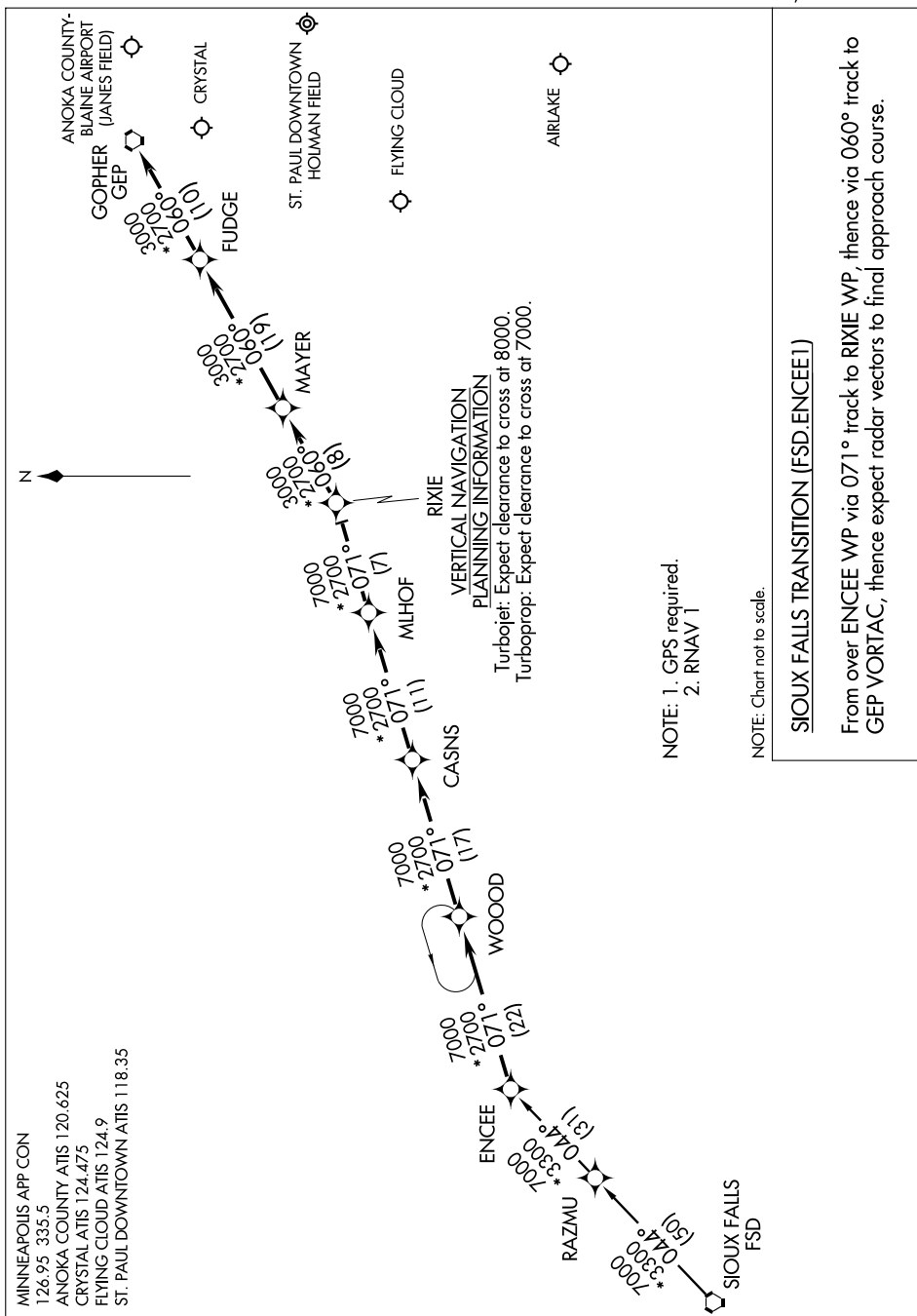
MINNEAPOLIS/CRYSTAL (MIC)
MINNEAPOLIS, MINNESOTA

ATIS
124.475
CRYSTAL TOWER ★
120.7
GND CON
121.6
CLNC DEL
121.6 (When Tower Closed)

VAR 1.5° E
JANUARY 2005
ANNUAL RATE OF CHANGE
0.1° W



NC-1, 17 DEC 2009 to 14 JAN 2010



▼

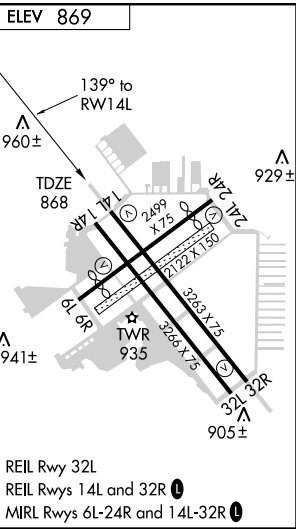
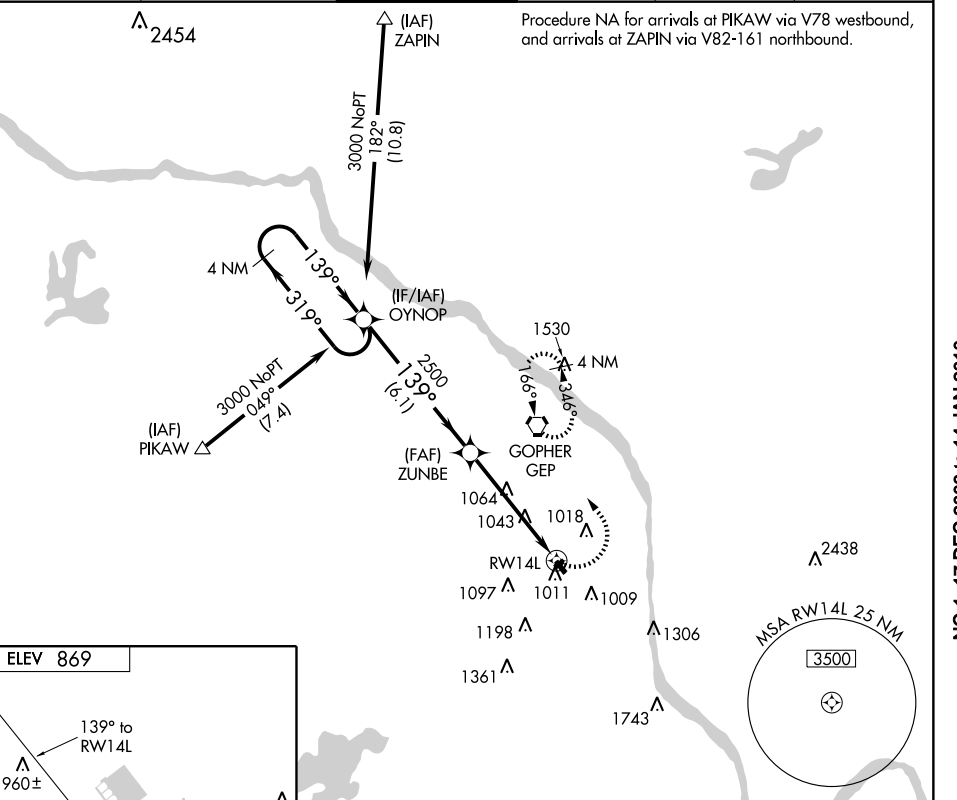
▲

DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.

When local altimeter setting not received, use Anoka County-Blaine Airport (Janes Field) altimeter setting and increase all MDA 80 feet, increase circling Cat D visibility ¼ mile.

MISSED APPROACH: Climbing left turn to 2700 direct GEP VORTAC and hold.

ATIS 124.475	MINNEAPOLIS APP CON 126.5	CRYSTAL TOWER 120.7 (CTAF) 0	GND CON 121.6	CLNC DEL 121.6	UNICOM 122.95
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4 NM Holding Pattern		VGSI and descent angles not coincident.		2700	GEP
OYNOP		ZUNBE		RWY 14L	
3000		2500		3.04° TCH 40	
6.1 NM		4.9 NM			
CATEGORY	A	B	C	D	
LNAB MDA	1380-1	512 (600-1)	1380-1½ 512 (600-1½)	1380-1¾ 512 (600-1¾)	
CIRCLING	1380-1	511 (600-1)	1380-1½ 511 (600-1½)	1460-2 591 (600-2)	

TWOLF ONE ARRIVAL

ST-264 (FAA)

MINNEAPOLIS, MINNESOTA

MINNEAPOLIS APP CON
126.95 335.5
118.72 (MSP RWY 35)
ANOKA COUNTY ATIS 120.625
CRYSTAL ATIS 124.475
FLYING CLOUD ATIS 124.9
MINNEAPOLIS ATIS
135.35 239.275
ST. PAUL DOWNTOWN ATIS
118.35

GOPHER
117.3 GEP
Chan 120

FLYING CLOUD
111.8 FCM
Chan 55
N44°49.54'-W93°27.41'

TRGET

N44°13.88'-W93°27.73'

VERTICAL NAVIGATION

PLANNING INFORMATION

MSP: Expect clearance to cross at 11000'.

All other airports: Turbojet: Expect

clearance to cross at 8000'.

Turboprop: Expect clearance to
cross at 7000'.

MANKATO
110.8 MKT
Chan 45

R-081

62

84

112

52

FORT DODGE
113.5 FOD
Chan 82
N42°36.67'-W94°17.69'
L-12, H-5

TICKT
N42°53.71'
W93°59.01'

7000
*2800
032°
(22)

TWOLF
N43°17.00'
W93°33.09'

LYNKs
N44°06.89'
W93°28.39'

KGEE
N43°44.94'
W93°30.48'

PIKKL
N44°22.82'
W93°21.49'

GDNEE
N44°30.68'
W93°15.97'

FARMINGTON
115.7 FGT
Chan 104
N44°37.86'-W93°10.93'

SLIKK
N44°47.90'
W93°17.21'

MINNEAPOLIS-ST. PAUL INTL/
WOLD CHAMBERLAIN

ST. PAUL DOWNTOWN
HOLMAN FIELD

ANOKA COUNTY-BLAINE AIRPORT
(JANES FIELD)

CRYSTAL

FLYING CLOUD

GOPHER
117.3 GEP
Chan 120

NOTE: RADAR required.

NOTE: DME required.

(NARRATIVE ON FOLLOWING PAGE)

NOTE: Chart not to scale.

ARRIVAL DESCRIPTION

FORT DODGE TRANSITION (FOD.TWOLF1): From over FOD VORTAC via FOD R-032 to TWOLF. Thence....

....From over TWOLF via GEP R-178 to KGEFF, then via GEP R-178 to TRGET INT, then via FGT R-201 to FGT VORTAC. Thence....

LANDING MSP RWYS 12L/R: From over FGT VORTAC via FGT R-330 to SLIKK, thence via 300° heading for radar vectors to final approach course.

LANDING MSP RWYS 30L/R, 4, 22, 17, 35: Via radar vectors to final approach course.

ALL OTHER AIRPORTS: From over TRGET INT via FCM VOR/DME R-174 to FCM VOR/DME then expect radar vectors to final approach course.

VORTAC GEP 117.3 Chan 120	APP CRS 166°	Rwy Idg TDZE Apt Elev	N/A N/A 869
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VOR or GPS-A
MINNEAPOLIS/CRYSTAL (MIC)

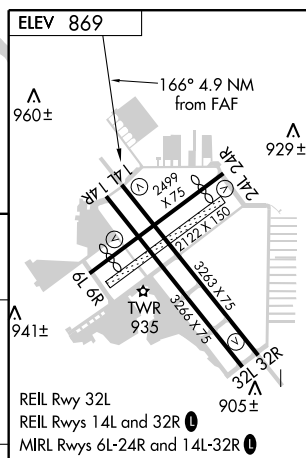
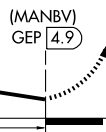
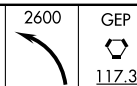
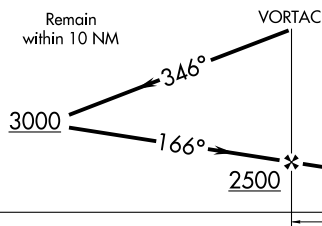
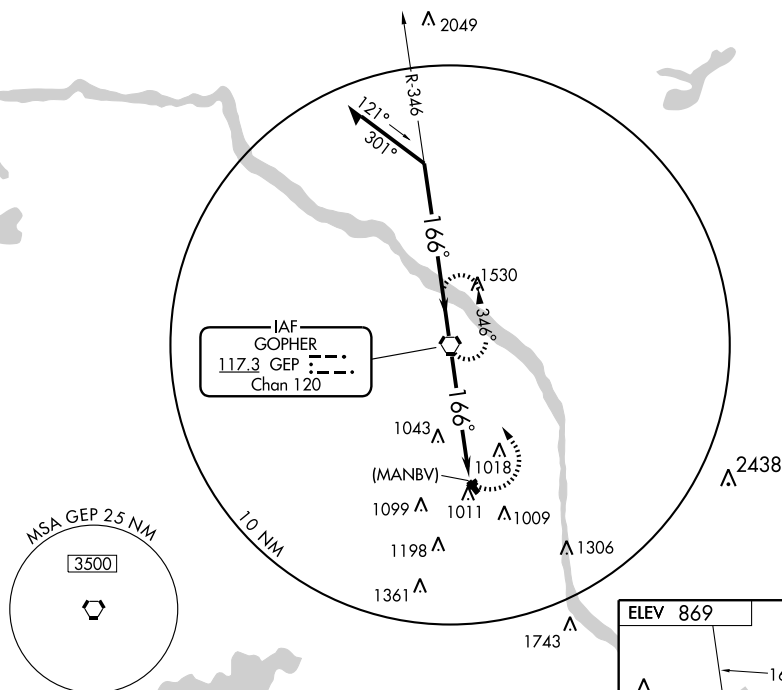
MISSED APPROACH: Climbing left turn to 2600 direct
GEP VORTAC and hold.

ATIS
124.475

MINNEAPOLIS APP CON
126.5

CRYSTAL TOWER
120.7 (CTAF) L

GND CON
121.6

CLNC DEL
121.6UNICOM
122.95

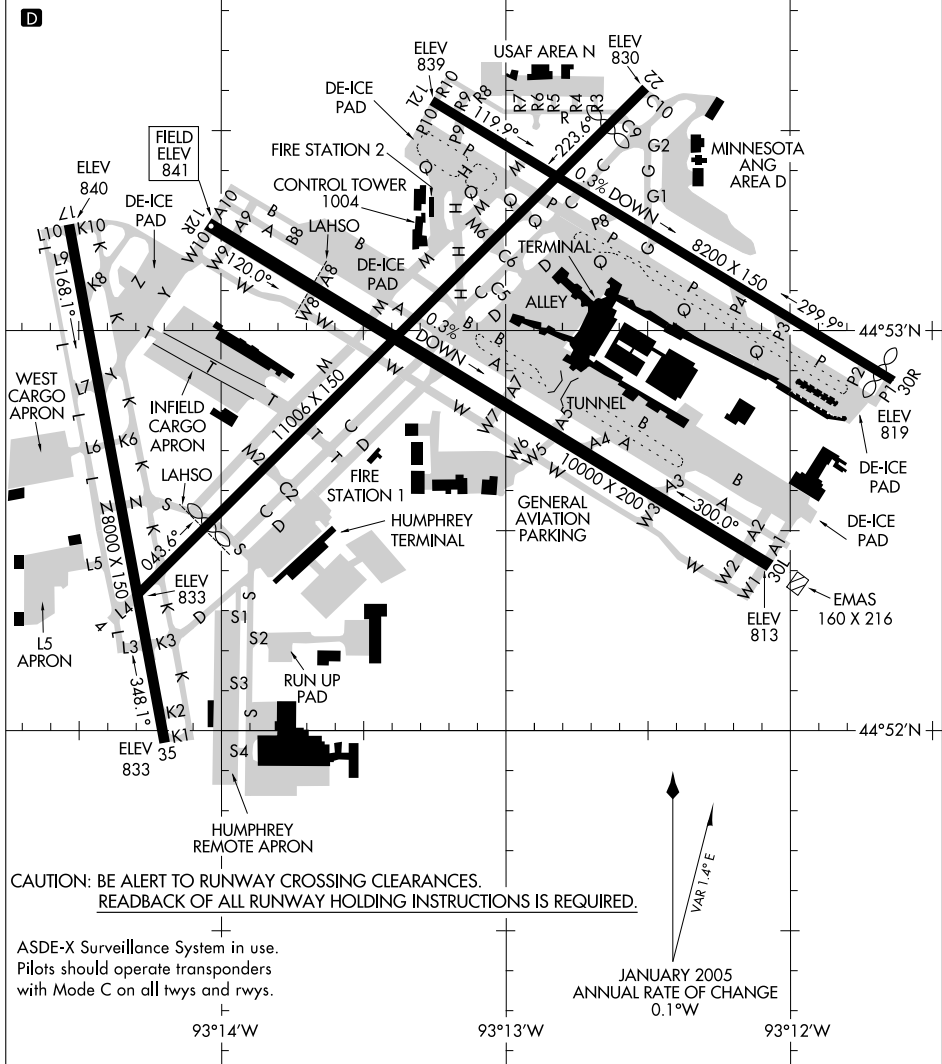
CATEGORY	A	B	C	D	FAF to MAP 4.9 NM					
CIRCLING	1360-1	491 (500-1)	591 (600-2)	1460-2	Knots	60	90	120	150	180
					Min:Sec	4:54	3:16	2:27	1:58	1:38

AIRPORT DIAGRAM

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)
AL-264 (FAA) MINNEAPOLIS, MINNESOTA

ATIS
ARR 135.35 239.275
DEP 120.8
MINNEAPOLIS TOWER
123.95 273.55 (Rwy 12L-30R)
126.7 273.55 (Rwys 12R-30L, 4-22)
123.675 273.55 (Rwy 17-35)
GND CON
N 121.8 348.6
S 121.9 348.6
W 127.925 348.6
CLNC DEL
133.2

RWYS 4-22, 12L-30R, 12R-30L and 17-35
S100, D200, ST175, DT400, DDT850



ASDE-X Surveillance System in use.
Pilots should operate transponders
with Mode C on all twys and rwys.

JANUARY 2005
ANNUAL RATE OF CHANGE
0.1°W

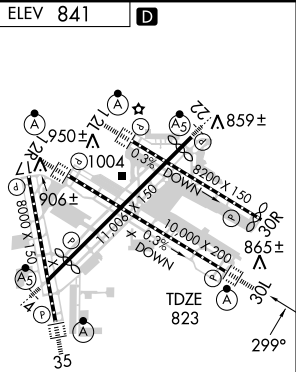
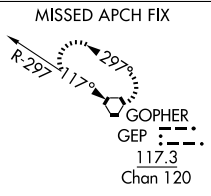
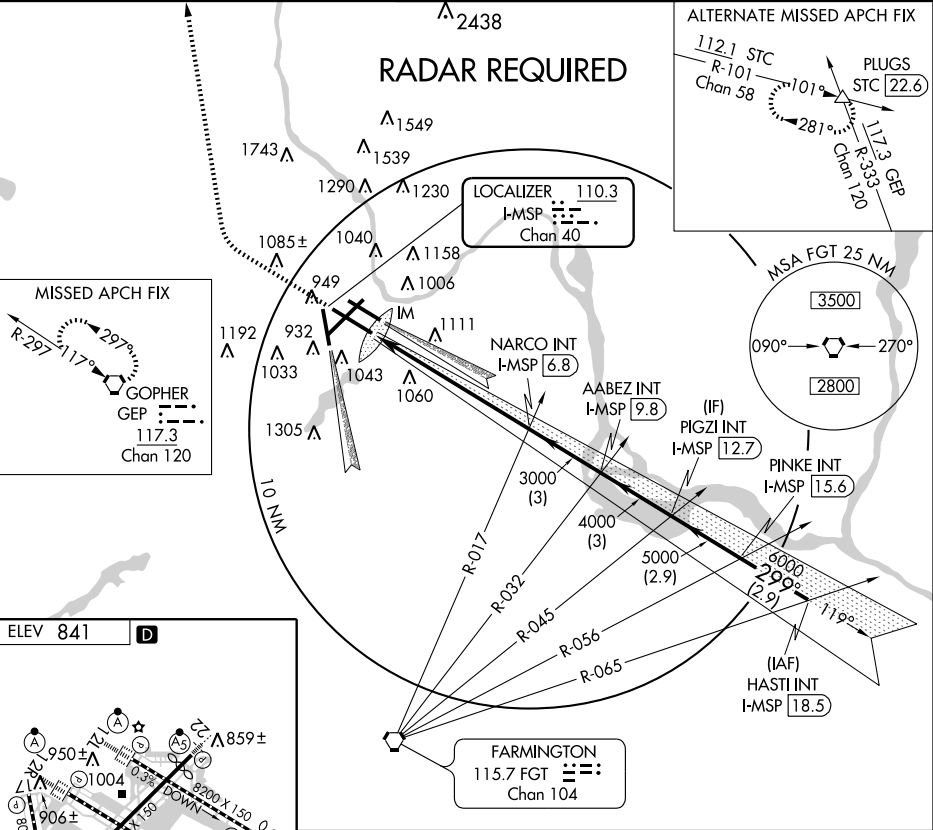
LOC/DME	I-MSP	APP CRS	Rwy Idg	10000
110.3		299°	TDZE	823
Chan 40			Apt Elev	841

CONVERGING ILS RWY 30L

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

<p>Simultaneous approach authorized with CONVERGING ILS Rwy 35.</p> <p>NA RADAR required.</p> <p>For inoperative ALSF, increase visibility, all Cats to 1 1/2.</p>	<p>ALSF-2</p>	<p>MISSED APPROACH: Climb to 1300 then climbing right turn to 4000 direct GEP VORTAC and hold.</p>
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<p>ATIS</p> <p>ARR 135.35 239.275</p> <p>DEP 120.8</p>	<p>MINNEAPOLIS APP CON</p> <p>119.3 335.5</p>	<p>MINNEAPOLIS TOWER</p> <p>123.95 273.55 (12L-30R)</p> <p>126.7 273.55 (12R-30L, 4-22)</p> <p>123.675 273.55 (17-35)</p>	<p>GND CON</p> <p>N 121.8 348.6</p> <p>S 121.9 348.6</p> <p>W 127.925</p>	<p>CLNC DEL</p> <p>133.2</p>
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HIRL all Rwy
REIL Rwy 30L
TDZE/CL Rwy 12L, 12R, 30L, and 35

<p>1300</p> <p>4000</p> <p>GEP</p> <p>117.3</p>	<p>* When authorized by ATC, intercept glidepath at AABEZ, 4000; or PIGZI, 5000; or PINKE, 6000.</p>	<p>HASTI INT I-MSP 18.5</p>
<p>VGSI and ILS glidepath not coincident</p>	<p>NARCO INT I-MSP 6.8</p> <p>AABEZ INT I-MSP 9.8</p> <p>PIGZI INT I-MSP 12.7</p> <p>PINKE INT I-MSP 15.6</p>	<p>7000</p>
<p>3000</p> <p>4000*</p> <p>5000*</p> <p>6000*</p>	<p>3000</p> <p>4000</p> <p>5000</p> <p>6000</p>	<p>GS 3.00°</p> <p>TCH 54</p>
<p>CATEGORY</p> <p>A</p> <p>B</p> <p>C</p> <p>D</p> <p>E</p>	<p>3000</p> <p>4000</p> <p>5000</p> <p>6000</p>	<p>7000</p>
<p>S-ILS 30L</p>	<p>1173/40</p> <p>350 (400-3/4)</p>	<p>7000</p>

LOC/DME I-NNN 110.7 Chan 44	APP CRS 299°	Rwy Idg TDZE Apt Elev	8000 823 841
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CONVERGING ILS RWY 30R

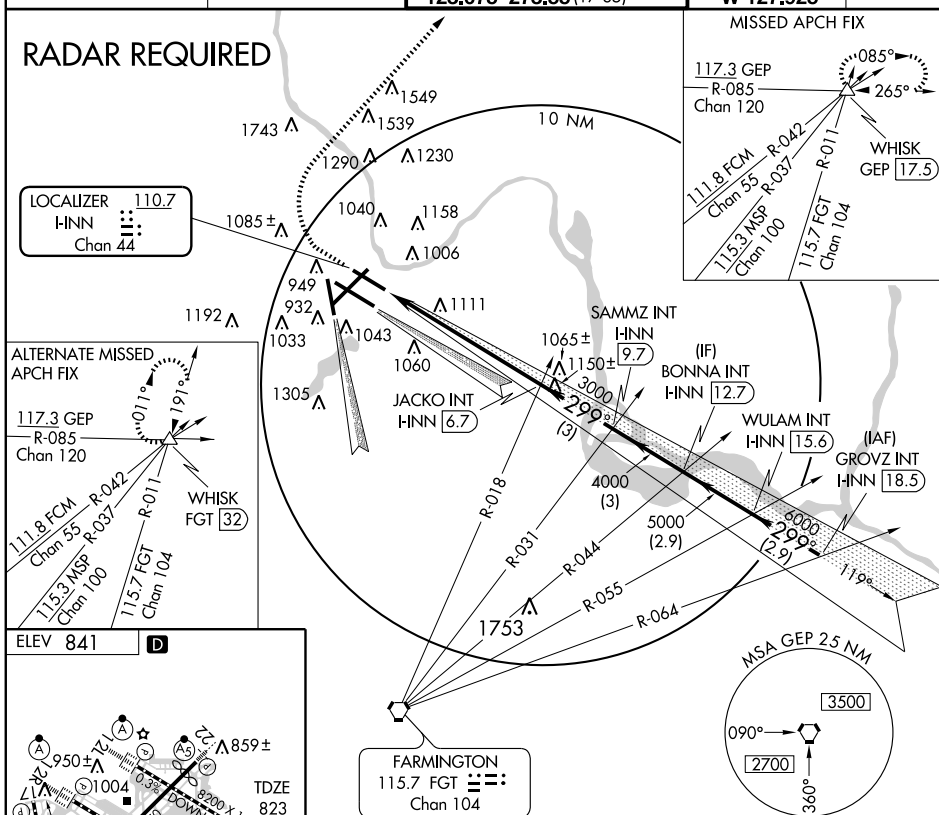
MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

Simultaneous approach authorized with CONVERGING ILS Rwy 35.
Radar required.

MISSED APPROACH: Climbing right turn to 4000 via heading 040° and GEP VORTAC R-085 to WHISK INT/17.5 DME and hold.

ATIS ARR 135.35 239.275 DEP 120.8	MINNEAPOLIS APP CON 119.3 335.5	MINNEAPOLIS TOWER 123.95 273.55 (12L-30R) 126.7 273.55 (12R-30L, 4-22) 123.675 273.55 (17-35)	GND CON N 121.8 348.6 S 121.9 348.6 W 127.925	CLNC DEL 133.2
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RADAR REQUIRED



<p>HIRL all Rws REIL Rws 17 and 30R TDZ/CL Rws 12L, 12R, 30L, and 35</p>	<p>4000 GEP R-085 117.3</p>	<p>WHISK △</p>	<p>*When authorized by ATC, intercept glidepath at SAMMZ, 4000; or BONNA, 5000; or WULAM, 6000.</p>	<p>SAMMZ INT H-NNN 9.7</p>	<p>BONNA INT H-NNN 12.7</p>	<p>WULAM INT H-NNN 15.6</p>	<p>GROVZ INT H-NNN 18.5</p>	<p>7000</p>	<p>GS 3.00° TCH 55</p>
<p>VGSI and ILS glidepath not coincident</p>	<p>3000</p>	<p>3000</p>	<p>4000*</p>	<p>5000*</p>	<p>6000*</p>	<p>299°</p>	<p>3000</p>	<p>3000</p>	<p>3000</p>
CATEGORY	A	B	C	D	E				
S-ILS 30R	1273-1½ 450 (500-1½)								

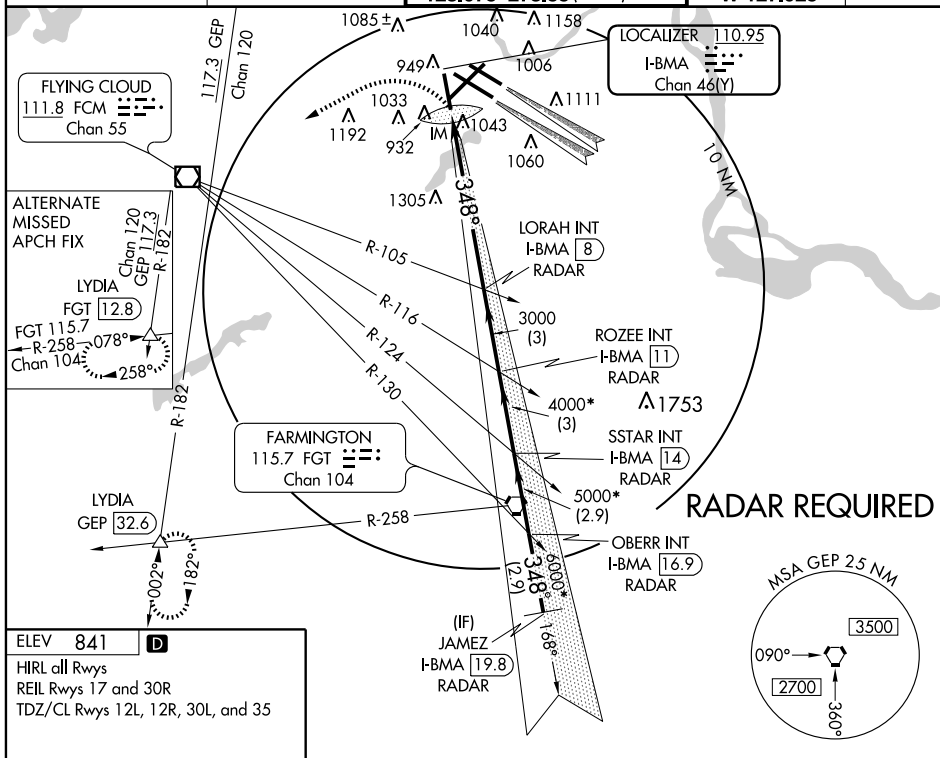
LOC/DME I-BMA 110.95 Chan 46 (Y)	APP CRS 348°	Rwy Idg TDZE Apt Elev	8000 834 841
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CONVERGING ILS RWY 35

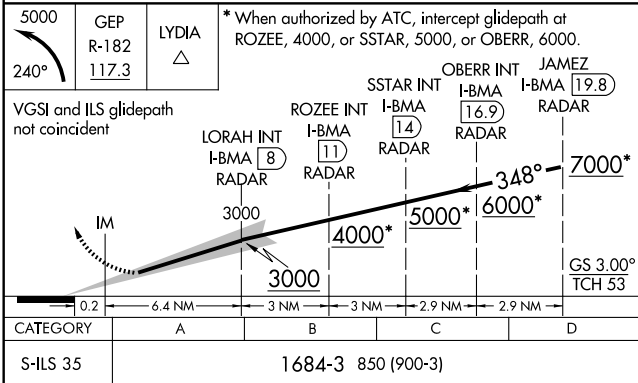
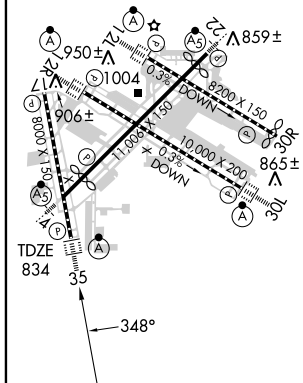
MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

<p>Simultaneous approach authorized with CONVERGING ILS Rwy 30L and CONVERGING ILS Rwy 30R. Inoperative table does not apply. No autoland on CONVERGING ILS RWY 35.</p>	<p>ALSF-2</p> 	<p>MISSED APPROACH: Climbing left turn to 5000 via heading 240° and GEP R-182 to LYDIA INT/GEP 32.6 DME and hold.</p>
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<p>ATIS ARR 135.35 239.275 DEP 120.8</p>	<p>MINNEAPOLIS APP CON 119.3 335.5</p>	<p>MINNEAPOLIS TOWER 123.95 273.55 (12L-30R) 126.7 273.55 (12R-30L, 4-22) 123.675 273.55 (17-35)</p>	<p>GND CON N 121.8 348.6 S 121.9 348.6 W 127.925</p>	<p>CLNC DEL 133.2</p>
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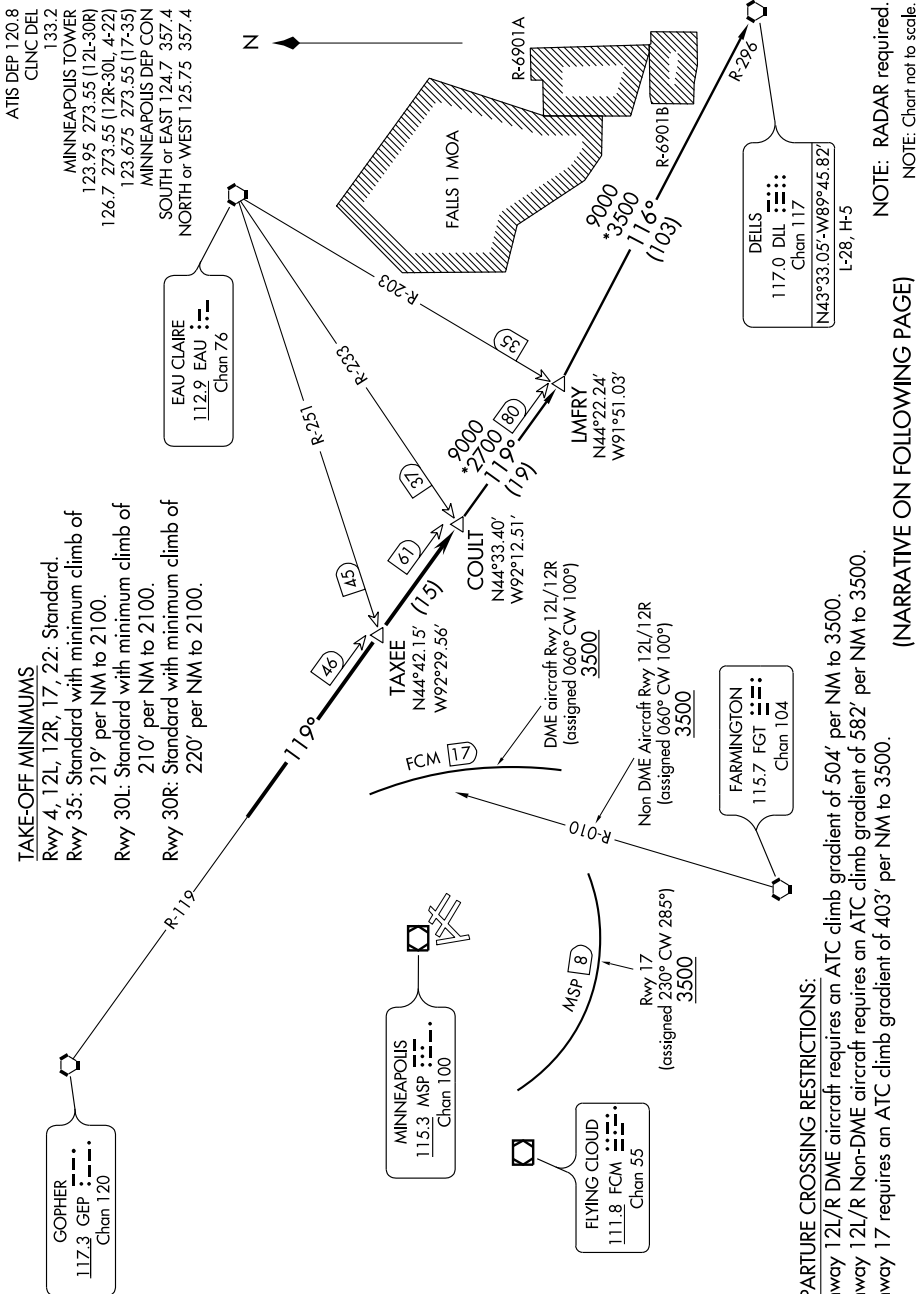


ELEV 841	D
HIRL all Rws	
REIL Rws 17 and 30R	
TDZ/CL Rws 12L, 12R, 30L, and 35	



COULT TWO DEPARTURE

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)
SL-264 (FAA) MINNEAPOLIS, MINNESOTA





DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Fly assigned heading for radar vectors to intercept GEP R-119 to COULT INT/GEF 61 DME. Turbojet aircraft maintain 7000 or lower assigned altitude, all other aircraft maintain 5000 or lower assigned altitude.

DME EQUIPPED AIRCRAFT RWY 12L/12R DEPARTURES: Initially assigned heading 060° clockwise to 100°, cross FCM 17 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence. . . .

TAKE-OFF RUNWAY 17: Initially assigned heading 230° clockwise to 285° cross MSP 8 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence. . . .

NON DME EQUIPPED AIRCRAFT RWY 12L/12R DEPARTURES: Initially assigned heading 060° clockwise to 100°: cross FGT R-010 at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence. . . .

TAKE-OFF RUNWAYS 4, 22, 30L/30R, 35: Initially assigned heading. Thence. . . .

. . . .via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

DELLS TRANSITION (COULT2.DLL): From over COULT INT via GEP R-119 and DLL R-296 to DLL VORTAC.

TAKE-OFF OBSTACLE NOTES

RWY 4: Multiple trees beginning 800' from DER, 264' left of centerline, up to 75' AGL/921' MSL.

Rod on building 2528' from DER, 1175' left of centerline, 78' AGL/922' MSL.

Fence 803' from DER, 585' left of centerline, 15' AGL/860' MSL.

Antenna on OL building 456' from DER, 319' left of centerline, 13' AGL/850' MSL.

Light poles 1932' from DER, 718' left of centerline, 45' AGL/885' MSL.

Stack 4535' from DER, 481' left of centerline, 139' AGL/949' MSL.

RWY 22: Tree 2906' from DER, 833' right of centerline, 94' AGL/934' MSL.

Hopper 1716' from DER, 456' left of centerline, 48' AGL/888' MSL.

RWY 17: Antenna 1272' from DER, 562' right of centerline, 57' AGL/891' MSL.

Pole 409' from DER, 530' right of centerline, 29' AGL/866' MSL.

Wind direction indicator on building 2619' from DER, 881' left of centerline, 97' AGL/918' MSL.

Building 2619' from DER, 859' left of centerline, 84' AGL/905' MSL.

Light 1176' from DER, 291' right of centerline, 11' AGL/875' MSL.

Tree 2619' from DER, on centerline, 79' AGL/900' MSL.

RWY 30L: Multiple trees beginning 1113' from DER, 701' left of centerline, up to 80' AGL/919' MSL.

Tree 1230' from DER, 633' right of centerline, 30' AGL/877' MSL.

Ground 28' from DER, 490' right of centerline 0' AGL/844' MSL.

RWY 30R: Building 1056' from DER, 198' left of centerline, 13' AGL/853' MSL.

Multiple trees beginning 3010' from DER, 334' left of centerline, up to 94' AGL/940' MSL.

Light pole 1849' from DER, 698' right of centerline, 17' AGL/871' MSL.

Fence 1327' from DER, 667' right of centerline, 8' AGL/857' MSL.

Tree 3703' from DER, 350' right of centerline, 67' AGL/914' MSL.

Rod on pole 3143' from DER, 47' right of centerline, 38' AGL/898' MSL.

RWY 35: Tree 175' from DER, 398' right of centerline, 73' AGL/883' MSL.

Multiple trees beginning 1989' from DER, 351' left of centerline, up to 65' AGL/902' MSL.

Multiple buildings beginning 5.5 NM from DER, 1787' left of centerline, up to 811' AGL/1743' MSL.

RWY 12R: Multiple trees beginning 1477' from DER, 407' left of centerline, up to 86' AGL/851' MSL.

Multiple trees beginning 1426' from DER, 124' right of centerline, up to 111' AGL/847' MSL.

Light pole 1408' from DER, 746' right of centerline, 85' AGL/843' MSL.

Radar reflector 983' from DER, 32' left of centerline, 15' AGL/829' MSL.

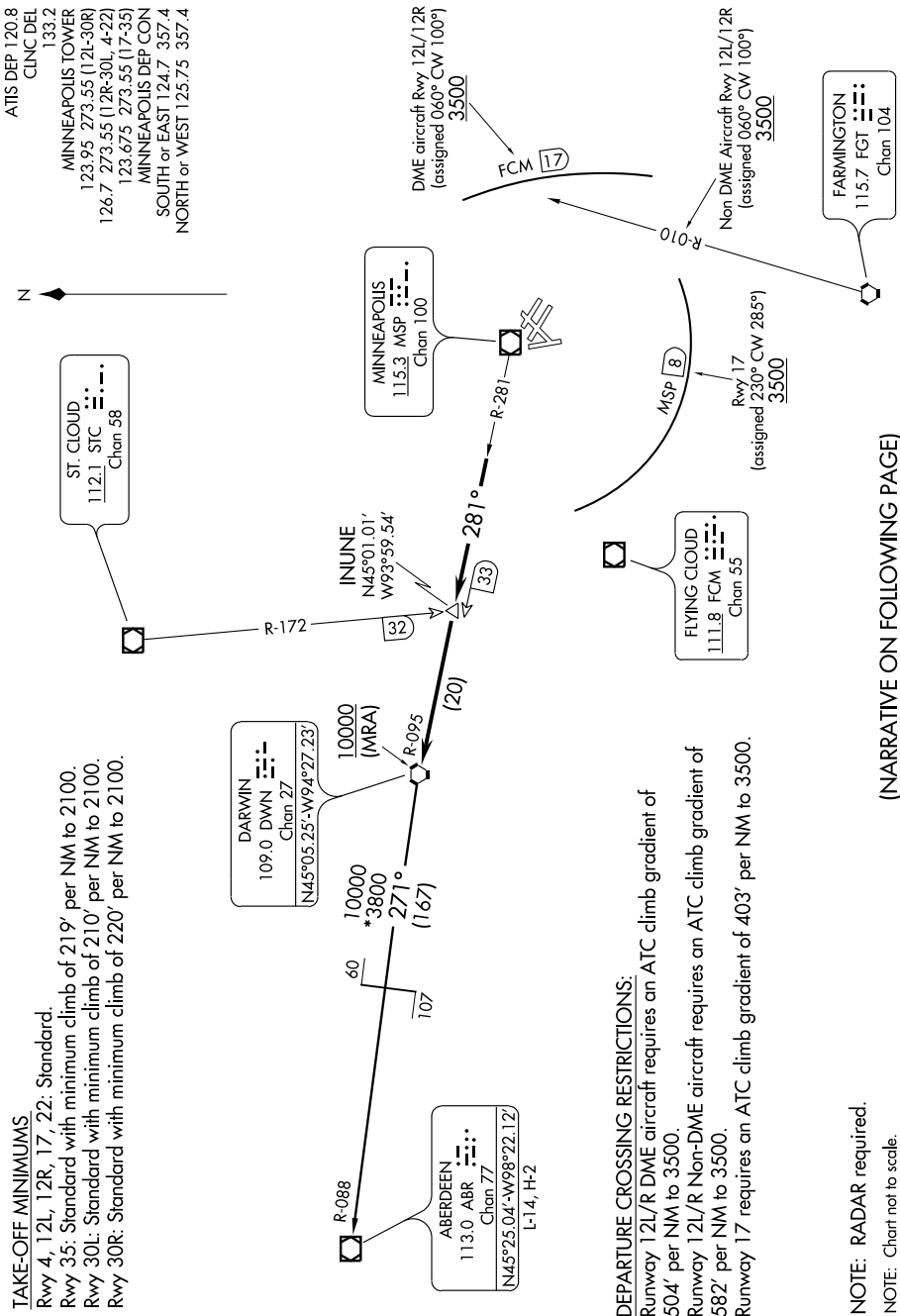
Pipe on building, 826' from DER, 576' left of centerline, 10' AGL/825' MSL.

OL on LOC 766' from DER, on centerline, 7' AGL/821' MSL.

DARWIN TWO DEPARTURE

SL-264 (FAA)

MINNEAPOLIS, MINNESOTA



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Fly assigned heading for radar vectors to intercept MSP R-281 and DWN R-095 to DWN VORTAC. Turbojet aircraft maintain 7000 or lower assigned altitude, all other aircraft maintain 5000 or lower assigned altitude.

DME EQUIPPED AIRCRAFT RWY 12L/12R DEPARTURES: Initially assigned heading 060° clockwise to 100°, cross FCM 17 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence. . . .

TAKE-OFF RUNWAY 17: Initially assigned heading 230° clockwise to 285° cross MSP 8 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence...

NON DME EQUIPPED AIRCRAFT RWY 12L/12R DEPARTURES: Initially assigned heading 060° clockwise to 100°, cross FGT R-010 at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence. . . .

TAKE-OFF RUNWAYS 4, 22, 30L/R, 35: Initially assigned heading, thence. . . .

. . . . via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

ABERDEEN TRANSITION (DWN2.ABR): From over DWN VORTAC via DWN R-271 and ABR R-088 to ABR VORTAC.

TAKE-OFF OBSTACLE NOTES

RWY 4: Multiple trees beginning 800' from DER, 264' left of centerline, up to 75' AGL/921' MSL.

Rod on building 2528' from DER, 1175' left of centerline, 78' AGL/922' MSL.

Fence 803' from DER, 585' left of centerline, 15' AGL/860' MSL.

Antenna on OL building 456' from DER, 319' left of centerline, 13' AGL/850' MSL.

Light poles 1932' from DER, 718' left of centerline, 45' AGL/885' MSL.

Stack 4535' from DER, 481' left of centerline, 139' AGL/949' MSL.

RWY 22: Tree 2906' from DER, 833' right of centerline, 94' AGL/934' MSL.

Hopper 1716' from DER, 456' left of centerline, 48' AGL/888' MSL.

RWY 17: Antenna 1272' from DER, 562' right of centerline, 57' AGL/891' MSL.

Pole 409' from DER, 530' right of centerline, 29' AGL/866' MSL.

Wind direction indicator on building 2619' from DER, 881' left of centerline, 97' AGL/918' MSL.

Building 2619' from DER, 859' left of centerline, 84' AGL/905' MSL.

Light 1176' from DER, 291' right of centerline, 11' AGL/875' MSL.

Tree 2619' from DER, on centerline, 79' AGL/900' MSL.

RWY 30L: Multiple trees beginning 1113' from DER, 701' left of centerline, up to 80' AGL/919' MSL.

Tree 1230' from DER, 633' right of centerline, 30' AGL/877' MSL.

Ground 28' from DER, 490' right of centerline 0' AGL/844' MSL.

RWY 30R: Building 1056' from DER, 198' left of centerline, 13' AGL/853' MSL.

Multiple trees beginning 3010' from DER, 334' left of centerline, up to 94' AGL/940' MSL.

Light pole 1849' from DER, 698' right of centerline, 17' AGL/871' MSL.

Fence 1327' from DER, 667' right of centerline, 8' AGL/857' MSL.

Tree 3703' from DER, 350' right of centerline, 67' AGL/914' MSL.

Rod on pole 3143' from DER, 47' right of centerline, 38' AGL/898' MSL.

RWY 35: Tree 175' from DER, 398' right of centerline, 73' AGL/883' MSL.

Multiple trees beginning 1989' from DER, 351' left of centerline, up to 65' AGL/902' MSL.

Multiple buildings beginning 5.5 NM from DER, 1787' left of centerline, up to 811' AGL/1743' MSL.

RWY 12R: Multiple trees beginning 1477' from DER, 407' left of centerline, up to 86' AGL/851' MSL.

Multiple trees beginning 1426' from DER, 124' right of centerline, up to 111' AGL/847' MSL.

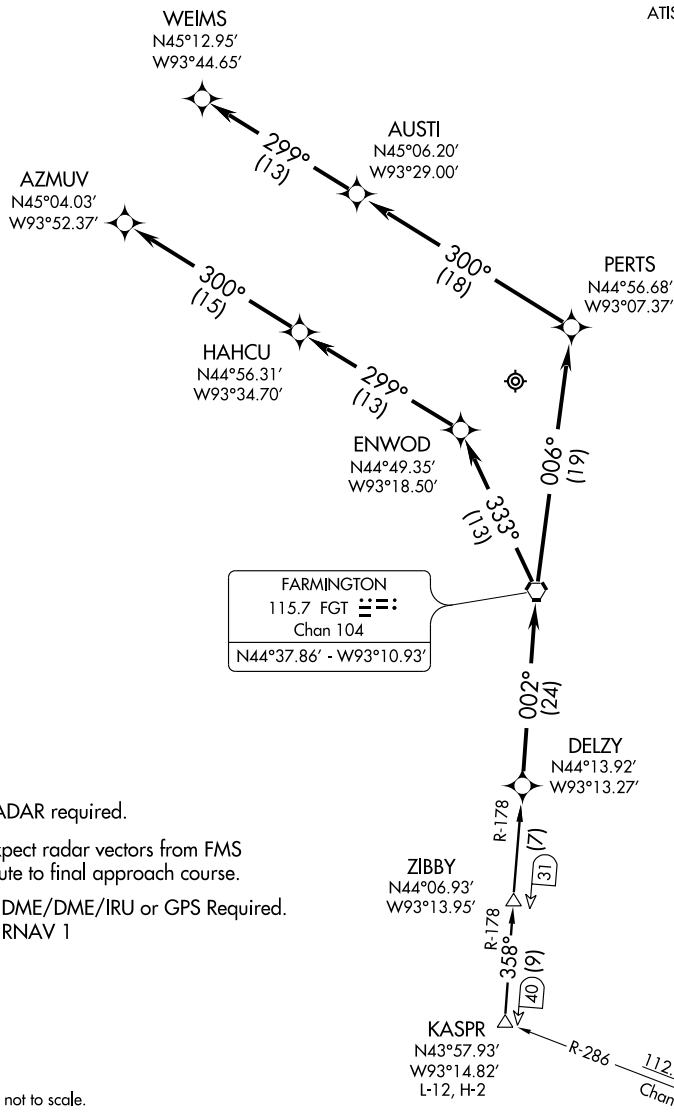
Light pole 1408' from DER, 746' right of centerline, 85' AGL/843' MSL.

Radar reflector 983' from DER, 32' left of centerline, 15' AGL/829' MSL.

Pipe on building, 826' from DER, 576' left of centerline, 10' AGL/825' MSL.

OL on LOC 766' from DER, on centerline, 7' AGL/821' MSL.

DELZY ONE (FMS) ARRIVAL

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN
ST-264 (FAA) MINNEAPOLIS, MINNESOTAMINNEAPOLIS APP CON
119.3 335.5
ATIS 135.35 239.275

Via the KASPR STAR from over DELZY WP: Thence . . .

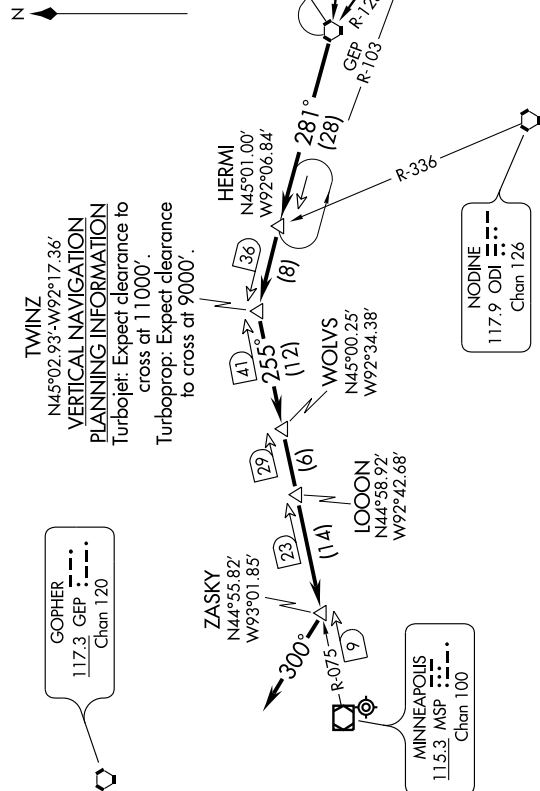
FOR RUNWAY 12L ARRIVALS: To FGT VORTAC to PERTS WP to AUSTI WP to WEIMS WP.

FOR RUNWAY 12R ARRIVALS: To FGT VORTAC to ENWOD WP to HAHCU WP to
AZMUW WP.

EAU CLAIRE EIGHT ARRIVAL

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN
ST-264 (FAA) MINNEAPOLIS, MINNESOTA

MINNEAPOLIS APP CON

126.95 335.5
ATIS 135.35 239.275

NOTE: DME and RADAR required.

BADGER TRANSITION (BAE EAU8): From over BAE VORTAC via BAE R-307 and EAU R-123 to EAU VORTAC. Thence....

GREEN BAY TRANSITION (GRB EAU8): From over GRB VORTAC via GRB R-278 and EAU R-093 to EAU VORTAC. Thence....

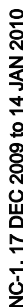
....From over EAU VORTAC via the EAU R-281 to TWINZ/36 DME, then via the MSP R-075 to ZASKY/9 DME. Thence....

LANDING RUNWAY 12L/R: After ZASKY/9 DME via 300° heading for radar vectors.

LANDING RUNWAY 30L/R, 35: Expect radar vectors to final approach course.

ALL OTHER MSP RUNWAYS: Expect radar vectors to final approach course.

NOTE: Chart not to scale.



LOC/DME I-PJL 110.7 Chan 44	APP CRS 119°	Rwy Idg TDZE Apt Elev	7620 839 841
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ILS or LOC RWY 12L

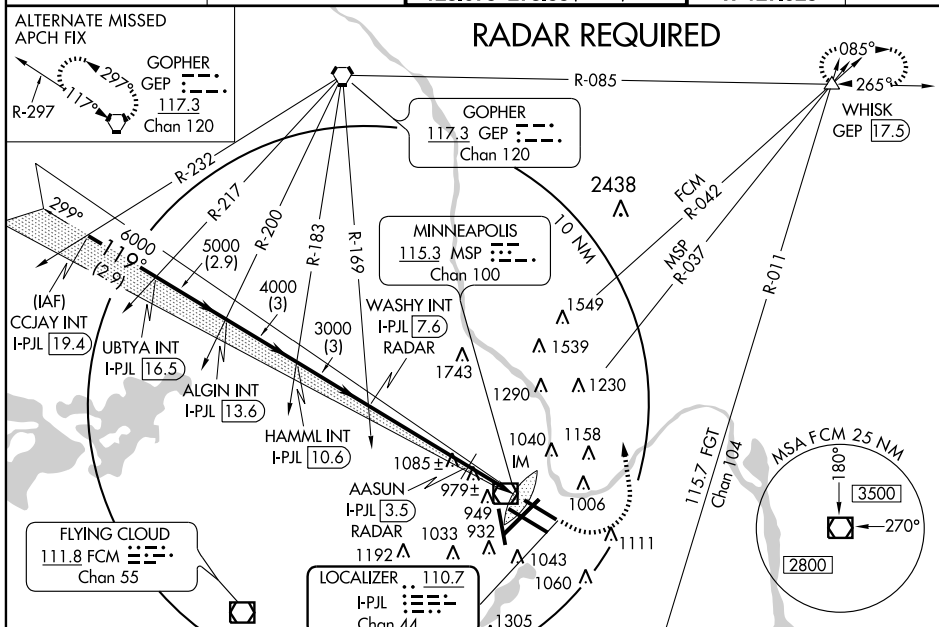
MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

T For inoperative ALSF, increase S-ILS 12L Cat E visibility to RVR 4000 and S-LOC 12L Cat E visibility to 2¼.

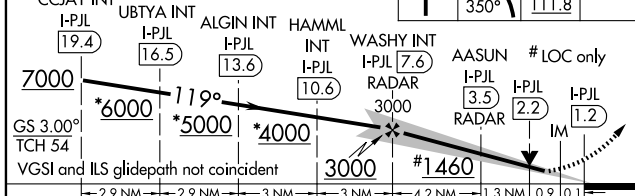
ALSF-2
A

MISSED APPROACH: Climb to 1500, then climbing left turn to 4000 via heading 350° and FCM R-042 to WHISK Int/GEOP 17.5 DME and hold.

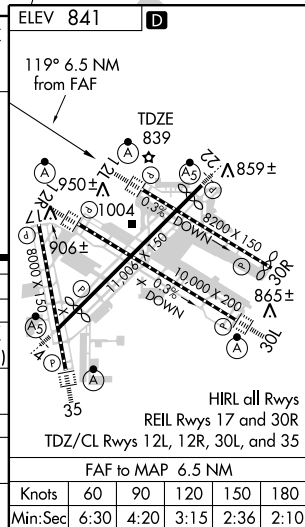
ATIS ARR 135.35 239.275 DEP 120.8	MINNEAPOLIS APP CON 119.3 335.5	MINNEAPOLIS TOWER 123.95 273.55 (12L-30R) 126.7 273.55 (12R-30L, 4-22) 123.675 273.55 (17-35)	GND CON N 121.8 348.6 S 121.9 348.6 W 127.925	CLNC DEL 133.2
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* When authorized by ATC, intercept glidepath at HAMML, 4000; or ALGIN, 5000; or UBTYA, 6000. CCJAY INT



CATEGORY	A	B	C	D	E
S-ILS 12L	1039/18 200 (200-½)				
S-LOC 12L	1460/24 621 (700-½)	1460/60 621 (700-¼)	1460-1½ 621 (700-½)	1460-1¾ 621 (700-¾)	
CIRCLING	1460-1 619 (700-1)	1460-1¾ 619 (700-¾)	1460-2 619 (700-2)	1660-3 819 (900-3)	
AASUN FIX MINIMUMS					
S-LOC 12L	1240/24 401 (400-½)	1240/40 401 (400-¾)	1240/50 401 (400-1)		
CIRCLING	1360-1 519 (600-1)	1360-1½ 519 (600-½)	1460-2 619 (700-2)	1660-3 819 (900-3)	



LOC/DME I-HKZ <u>110.3</u> Chan 40	APP CRS 119°	Rwy Idg 10000 TDZE 841 Apt Elev 841
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ILS or LOC RWY 12R

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

T For inoperative ALSF, increase S-ILS 12R Cat E visibility
A to RVR 4000 and S-LOC 12R Cat E visibility to 2.

ALSF-2

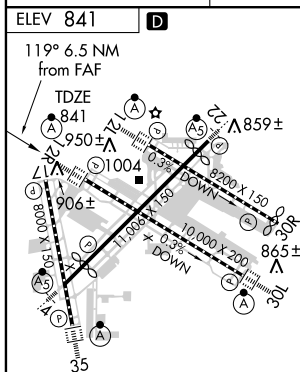
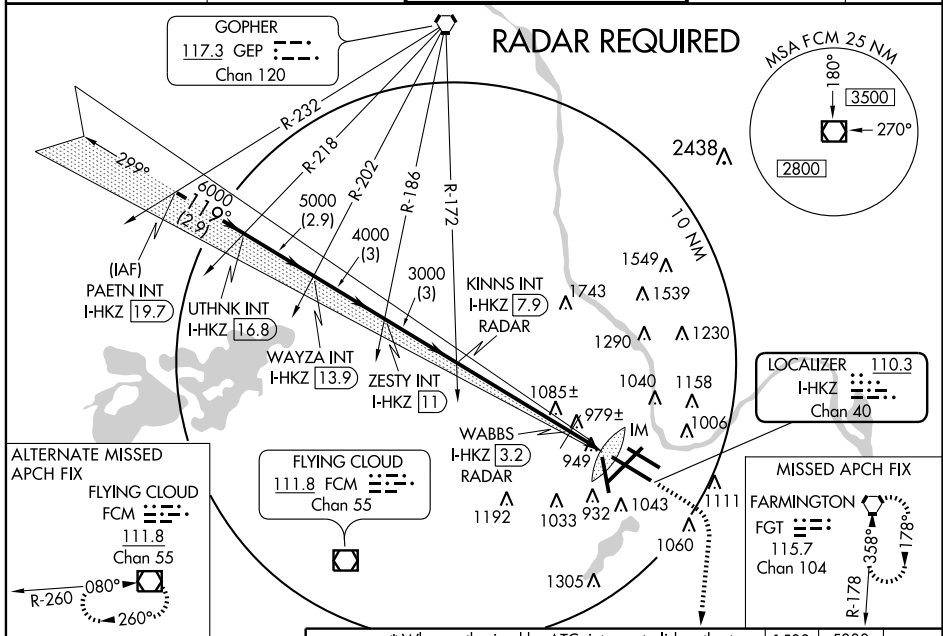
MISSED APPROACH: Climb to 1500, then climbing right turn to 5000 direct FGT VORTAC and hold.

ATIS
ARR **135.35 239.275**
DEP **120.8**

MINNEAPOLIS APP CON
119.3 335.5

MINNEAPOLIS TOWER
123.95 273.55 (12L-30R)
126.7 273.55 (12R-30L, 4-22)
123.675 273.55 (17-35)

GND CON
N 121.8 348.6
S 121.9 348.6
W 127.925

CLNC DEL
133.2

HIRL all Rwys
REIL Rwys 17 and 30R
TDZ/CL Rwys 12L, 12R, 30L, and 35

FAF to MAP 6.5 NM					
Knots	60	90	120	150	180
Min:Sec	6:30	4:20	3:15	2:36	2:10

* When authorized by ATC, intercept glidepath at ZESTY, 4000; or WAYZA, 5000; or UTHNK, 6000.

CATEGORY	A	B	C	D	E
S-ILS 12R	1041/18 200 (200-½)				
S-LOC 12R	1420/24 579 (600-½)	1420/50 579 (600-1)	1420/60 579 (600-1¼)	1420-1½ 579 (600-1½)	
CIRCLING	1420-1 579 (600-1)	1420-1½ 579 (600-1½)	1460-2 619 (700-2)	1660-3 819 (900-3)	

WABBS FIX MINIMUMS

S-LOC 12R	1240/24 399 (400-½)	1240/40 399 (400-¾)	1240/50 399 (400-1)
CIRCLING	1360-1 519 (600-1)	1360-1½ 519 (600-1½)	1460-2 619 (700-2)
			1660-3 819 (900-3)

LOC/DME I-MSP <u>110.3</u> Chan 40	APP CRS 299°	Rwy Idg 10000 TDZE 823 Apt Elev 841
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ILS or LOC RWY 30L
MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

T For inoperative ALSF, increase S-ILS 30L Cat E visibility
A to RVR 4000 and S-LOC 30L Cat E visibility to 2.

ALSF-2

MISSED APPROACH: Climb to 1300, then climb to 4000 via heading 295° and GEP VORTAC R-180 to GEP and hold.

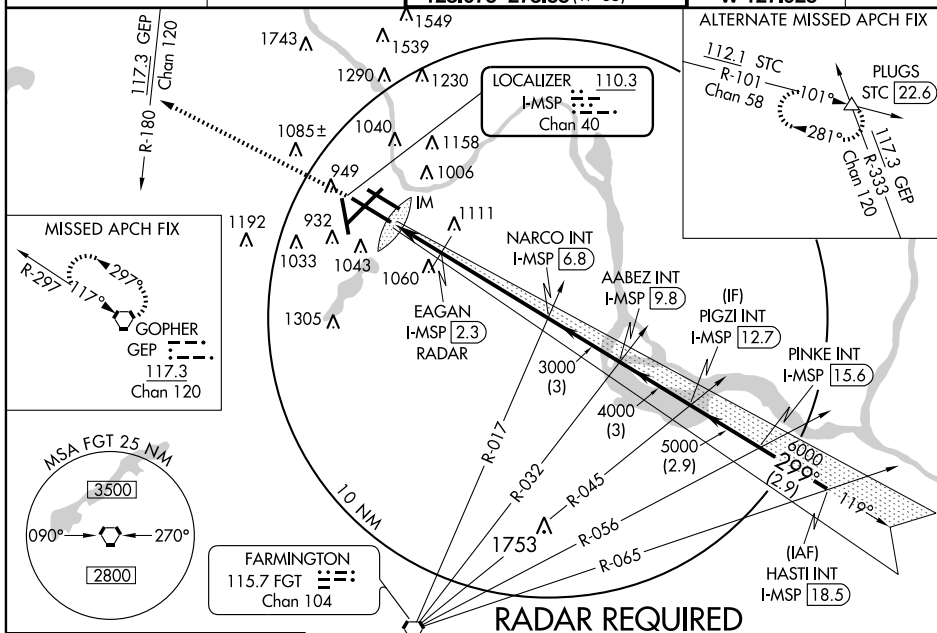
ATIS
ARR **135.35 239.275**
DEP **120.8**

MINNEAPOLIS APP CON
119.3 335.5

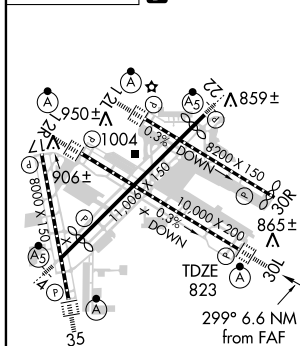
MINNEAPOLIS TOWER
123.95 273.55 (12L-30R)
126.7 273.55 (12R-30L, 4-22)
123.675 273.55 (17-35)

GND CON	
N	121.8 348.6
S	121.9 348.6
W	127.925

CLNC DEL
133.2

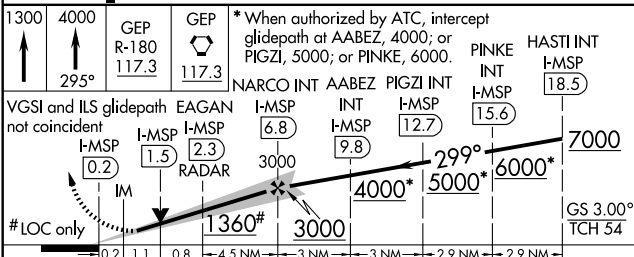


ELEV	841	D
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HIRL all Rwy's
REIL Rwy's 17 and 30R
TDZ/CL Rwy's 12L, 12R, 30L, and 35

FAF to MAP 6.6 NM					
Knots	60	90	120	150	180
Min:Sec	6:36	4:24	3:18	2:38	2:12



CATEGORY	A	B	C	D	E
S-ILS 30L	1023/18 200 (200-½)				
S-LOC 30L	1360/24 537 (600-½)	1360/50 537 (600-1)	1360/60 537 (600-1¼)	1360-1½	537 (600-1½)
CIRCLING	1360-1 519 (600-1)	1360-1½ 519 (600-1½)	1460-2 619 (700-2)	1660-3	819 (900-3)
EAGAN FIX MINIMUMS					
S-LOC 30L	1280/24 457 (500-½)	1280/40 457 (500-¾)	1280/50 457 (500-1)		
CIRCLING	1360-1 519 (600-1)	1360-1½ 519 (600-1½)	1460-2 619 (700-2)	1660-3	819 (900-3)

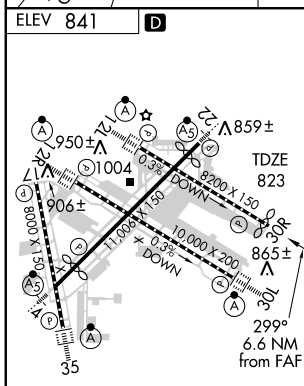
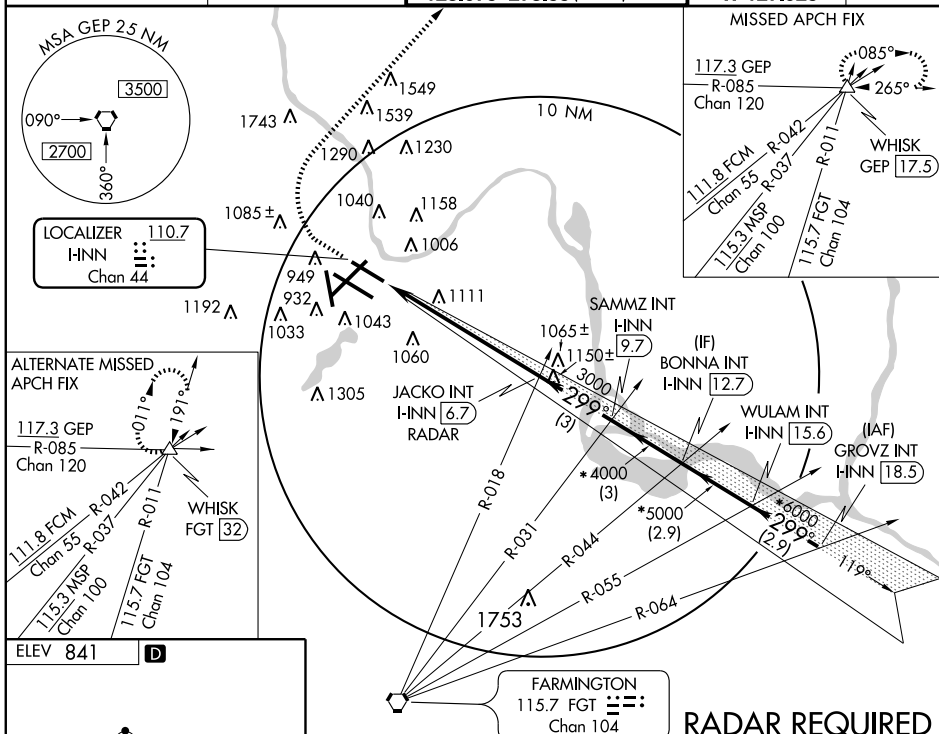
LOC/DME I-INN 110.7 Chan 44	APP CRS 299°	Rwy Idg TDZE Apt Elev	8000 823 841
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ILS or LOC RWY 30R

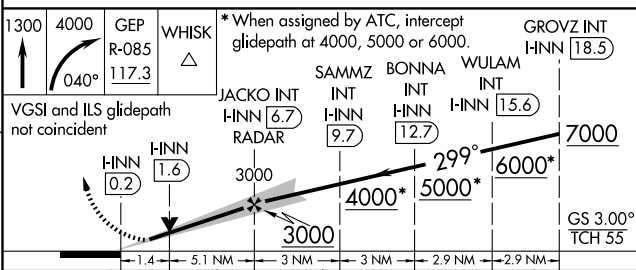
MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

▼ ▲	MISSED APPROACH: Climb to 1300, then climbing right turn to 4000 via heading 040° and GEP VORTAC R-085 to WHISK INT/17.5 DME and hold.		
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ATIS ARR 135.35 239.275 DEP 120.8	MINNEAPOLIS APP CON 119.3 335.5	MINNEAPOLIS TOWER 123.95 273.55 (12L-30R) 126.7 273.55 (12R-30L, 4-22) 123.675 273.55 (17-35)	GND CON N 121.8 348.6 S 121.9 348.6 W 127.925	CLNC DEL 133.2
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HIRL all Rwy's REIL Rwy's 17 and 30R TDZ/CL Rwy's 12L, 12R, 30L, and 35 FAF to MAP 6.6 NM					
Knots	60	90	120	150	180
Min:Sec	6:36	4:24	3:18	2:38	2:12



CATEGORY	A	B	C	D	E
S-ILS 30R	1073/40 250 (300-¾)				
S-LOC 30R	1340/50	517 (500-1)	1340-1½ 517 (500-1½)	1340-1¾	517 (500-1¾)
CIRCLING	1360-1	519 (600-1)	1360-1½ 519 (600-1½)	1460-2	1660-3 819 (900-3)

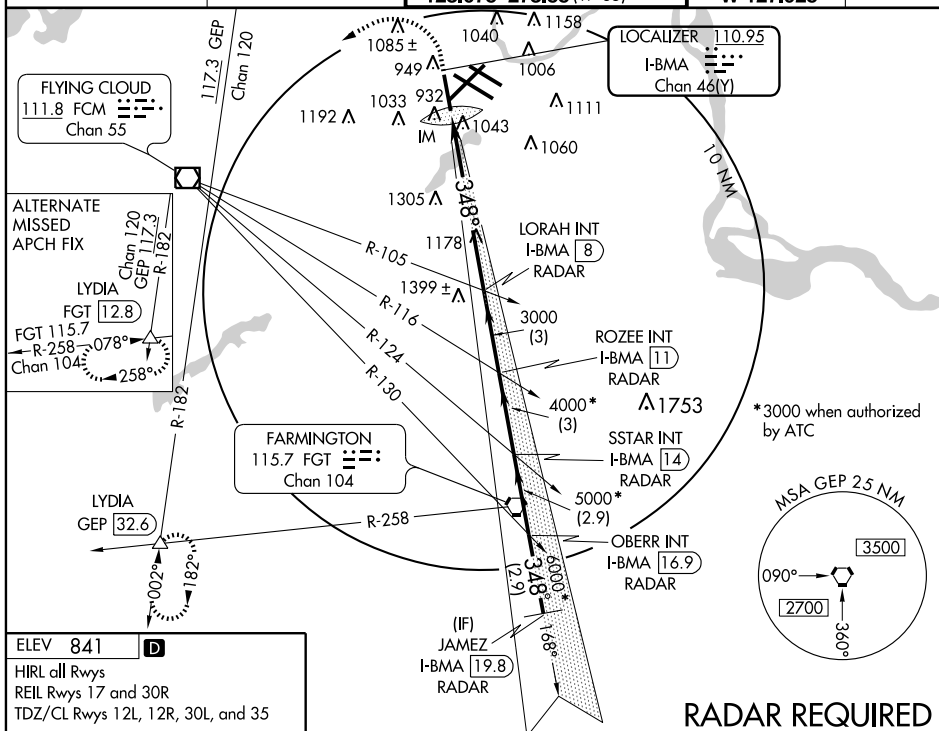
ILS or LOC RWY 35
MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

ALSF-2

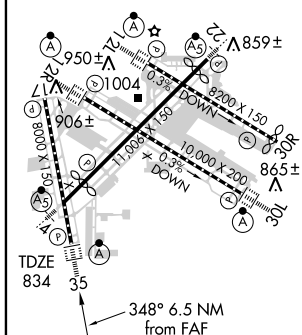
MISSED APPROACH: Climb to 1600 then climbing left turn to 5000 via heading 240° and GEP R-182 to LYDIA INT/ GEP 32.6 DME and hold.

MINNEAPOLIS TOWER
123.95 273.55 (12L-30R)
126.7 273.55 (12R-30L, 4-22)
123.675 273.55 (17-35)

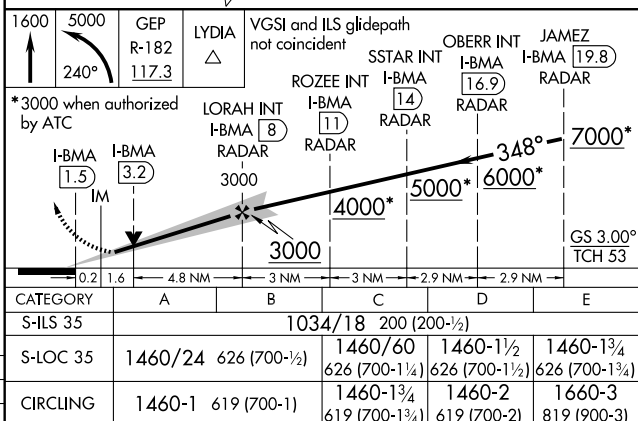
GND CON	
N	121.8 348.6
S	121.9 348.6
W	127.925

CLNC DEL
133.2

ELEV 841	D
HIRL all Rwy's	
REIL Rwy's 17 and 30R	
TDZ/CL Rwy's 12L, 12R, 30L, and 35	







FAF to MAP 6.5 NM					
Knots	60	90	120	150	180
Min:Sec	6:30	4:20	3:15	2:36	2:10



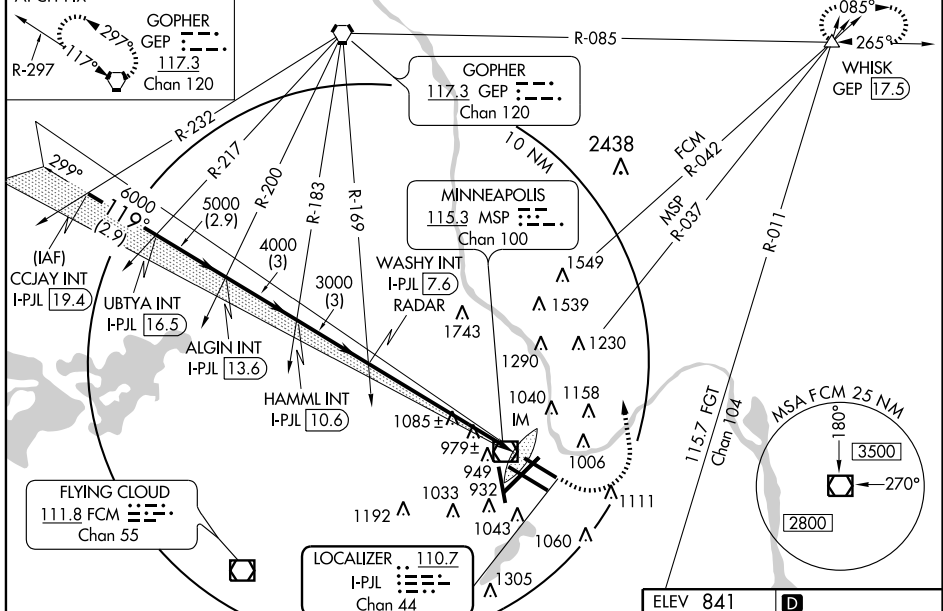
LOC/DME I-PJL 110.7 Chan 44	APP CRS 119°	Rwy Idg 7620 TDZE 839 Apt Elev 841
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ILS RWY 12L (CAT II)

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

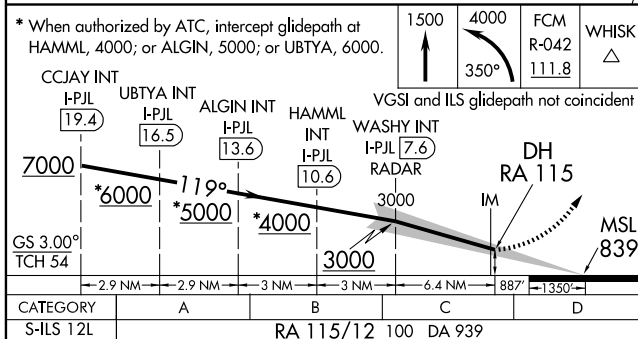
 		ALSF-2  	MISSED APPROACH: Climb to 1500, then climbing left turn to 4000 via heading 350° and FCM R-042 to WHISK Int/GEF 17.5 DME and hold.		
ATIS ARR 135.35 239.275 DEP 120.8	MINNEAPOLIS APP CON 119.3 335.5	MINNEAPOLIS TOWER 123.95 273.55 (12L-30R) 126.7 273.55 (12R-30L, 4-22) 123.675 273.55 (17-35)		GND CON N 121.8 348.6 S 121.9 348.6 W 127.95	CLNC DEL 133.2

ALTERNATE MISSED
APCH FIX

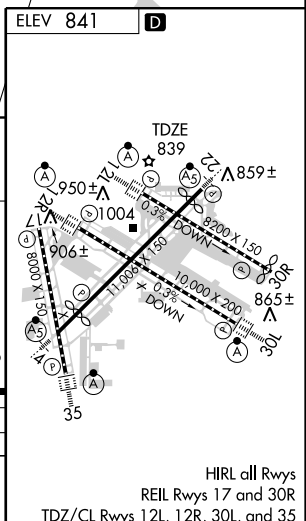


RADAR REQUIRED

* When authorized by ATC, intercept glidepath at HAMML, 4000; or ALGIN, 5000; or UBTYA, 6000.





CATEGORY II ILS - SPECIAL AIRCREW
& AIRCRAFT CERTIFICATION REQUIRED



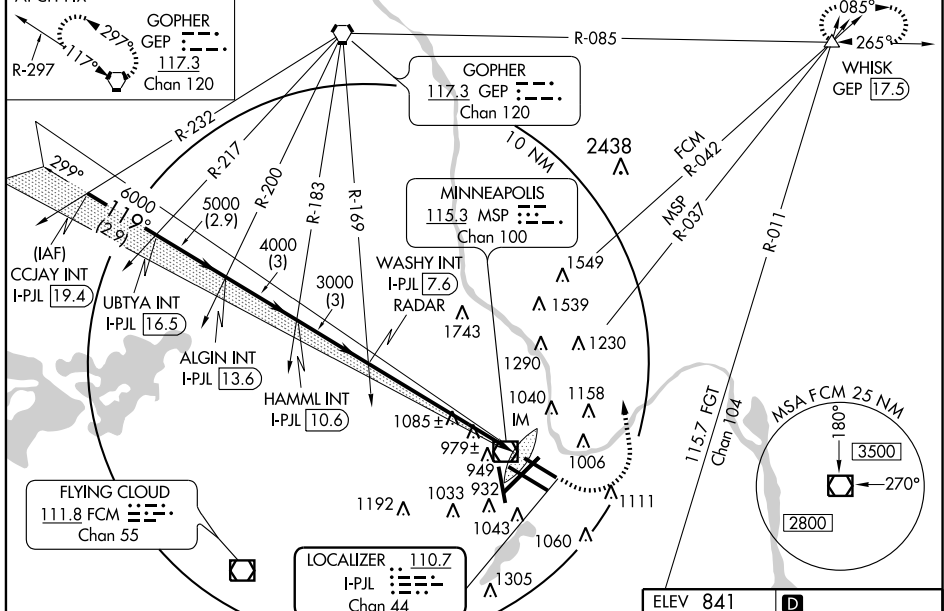
LOC/DME I-PJL 110.7 Chan 44	APP CRS 119°	Rwy Idg 7620 TDZE 839 Apt Elev 841
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ILS RWY 12L (CAT III)

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

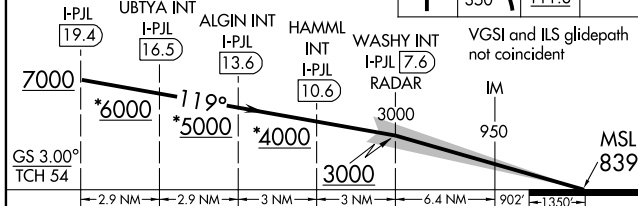
		ALSF-2 	MISSED APPROACH: Climb to 1500, then climbing left turn to 4000 via heading 350° and FCM R-042 to WHISK Int/GEP 17.5 DME and hold.		
ATIS ARR 135.35 239.275 DEP 120.8	MINNEAPOLIS APP CON 119.3 335.5	MINNEAPOLIS TOWER 123.95 273.55 (12L-30R) 126.7 273.55 (12R-30L, 4-22) 123.675 273.55 (17-35)		GND CON N 121.8 348.6 S 121.9 348.6 W 127.925	CLNC DEL 133.2

ALTERNATE MISSED
APCH FIX



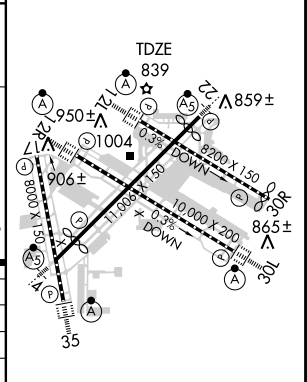
RADAR REQUIRED

* When authorized by ATC, intercept glidepath at HAMML, 4000; or ALGIN, 5000; or UBTYA, 6000.
CCJAY INT



CATEGORY	A	B	C	D
S-ILS 12L		CAT IIIa	RVR 07	
S-ILS 12L		CAT IIIb	RVR 06	
S-ILS 12L		CAT IIIc	NA	

CATEGORY III ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED



HIRL all Rwy's
REIL Rwy's 17 and 30R
TDZ/CL Rwy's 12L, 12R, 30L, and 35

LOC/DME I-HKZ <u>110.3</u> Chan 40	APP CRS 119°	Rwy Idg 10000 TDZE 841 Apt Elev 841
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ILS RWY 12R (CAT II)
MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)



ALSF-2



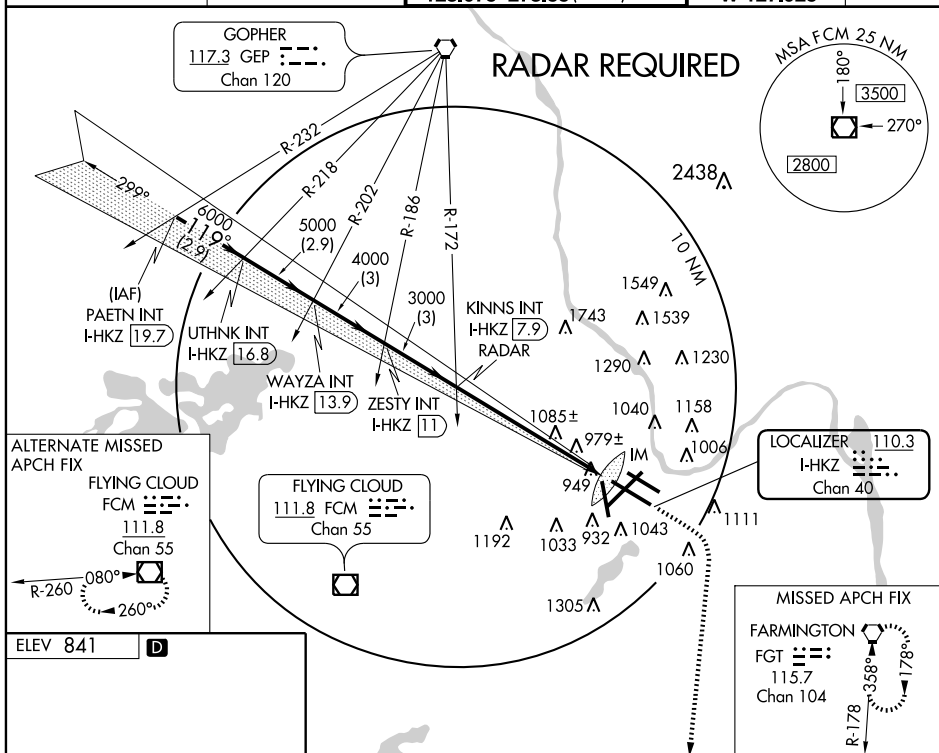
MISSED APPROACH: Climb to 1500, then climbing right turn to 5000 direct FGT VORTAC and hold.

ATIS
ARR **135.35 239.275**
DEP **120.8**

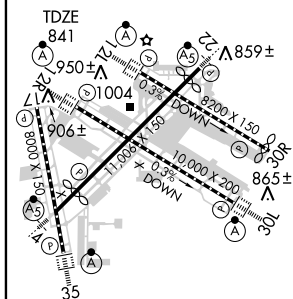
MINNEAPOLIS APP CON
119.3 335.5

MINNEAPOLIS TOWER
123.95 273.55 (12L-30R)
126.7 273.55 (12R-30L, 4-22)
123.675 273.55 (17-35)

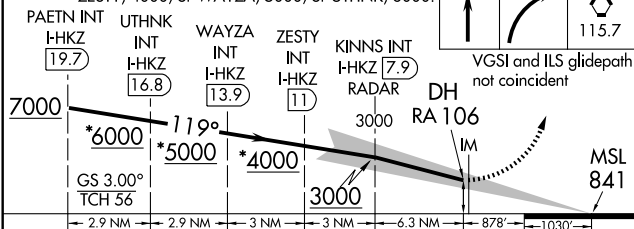
GND CON
N 121.8 348.6
S 121.9 348.6
W 127.925

CLNC DEL
133.2

ELEV 841



* When authorized by ATC, intercept glidepath at ZESTY, 4000; or WAYZA, 5000; or UTHNK, 6000.




CATEGORY	A	B	C	D
S-ILS 12R	106/12 100 DA 941			

HIRL all Rwy's
REIL Rwy's 17 and 30R
TDZ/CL Rwy's 12L, 12R, 30L, and 35

CATEGORY II ILS - SPECIAL AIRCREW
& AIRCRAFT CERTIFICATION REQUIRED

MISSED APPROACH: Climb to 1500, then climbing right turn to 5000 direct FGT VORTAC and hold.

CLNC DEL
133.2

FLYING CLOUD
111.8 FCM 
Chan 55

MISSED APCH FIX
FARMINGTON
FGT $\equiv \equiv \equiv$
115.7
Chan 104

D

* When authorized by ATC, intercept glidepath at ZESTY, 4000; or WAYZA, 5000; or UTHNK, 6000.

PAETN INT




I-HKZ 19.7)

HNK INT
I-HKZ

WAYZA
INT

ESTY K

NNS INT

1500	5000	FGT
		
		115.7

VGS1 and ILS glidepath
not coincident

CATEGORY	A	B	C	D
S-ILS 12R		CAT IIIa	RVR 07	
S-ILS 12R		CAT IIIb	NA	
S-ILS 12R		CAT IIIc	NA	

CATEGORY III ILS - SPECIAL AIRCREW
& AIRCRAFT CERTIFICATION REQUIRED

HIRL all Rwys
REIL Rwys 17 and 30R
TDZ/CL Rwys 12L, 12R, 30L, and 35

AL-264 (FAA)

ILS RWY 30L (CAT II)

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

TA

ALSF-2




MISSED APPROACH: Climb to 1300, then climb to 4000 via heading 295° and GEP VORTAC R-180 to GEP and hold.

ATIS
ARR **135.35 239.275**
DEP **120.8**

MINNEAPOLIS APP CON
119.3 335.5

MINNEAPOLIS TOWER
123.95 273.55 (12L-30R)
126.7 273.55 (12R-30L, 4-22)
123.675 273.55 (17-35)

GND CON
N 121.8 348.6
S 121.9 348.6
W 127.925


CLNC DEL
133.2

RADAR REQUIRED

ALTERNATE MISSED APCH FIX

Diagram illustrating a 120° plug connection between two channels. The left channel is labeled "R-101" and "Chan 58" with a value of 112.1 STC. The right channel is labeled "R-333" and "Chan 122" with a value of 117.3 STC. The connection is labeled "PLUGS" and "STC 22.6". The angle between the channels is 101°, and the angle between the plug and the channel is 281°.

MISSED APCH FIX



 R-297 297° 117° GOPHER

 GEP 117.3

 Chan 120

MSA FGI 23 NM

FARMINGTON
15.7 FGT $\frac{\cdot\cdot}{\cdot\cdot} =$
Chan 104

ELEV 841

D

Missed approach obstructions require climb gradient of at least 500 FPM/100K, 750 FPM/150K, 1000 FPM/200K, no wind conditions. Aircraft to 885 feet MSL 789 feet north of Rwy centerline.

1300
↑

VGSI and ILS glidepath
not coincident

* When authorized by ATC, intercept glidepath at AABEZ, 4000; or PIGZI, 5000; or PINKE, 6000.

NARCO INT	AABEZ	PIGZI INT	PINKE INT	I-MSP
I-MSP	INT	I-MSP	I-MSP	18.5
6.8	I-MSP	12.7	15.6	

CATEGORY	A	B	C	D
S-ILS 30L	RA-NA/12 110 DA 933			

HIRL all Rwy's
REIL Rwy's 17 and 30R
TDZ/CL Rwy's 12L, 12R, 30L, and 35

CATEGORY II ILS - SPECIAL AIRCREW
& AIRCRAFT CERTIFICATION REQUIRED

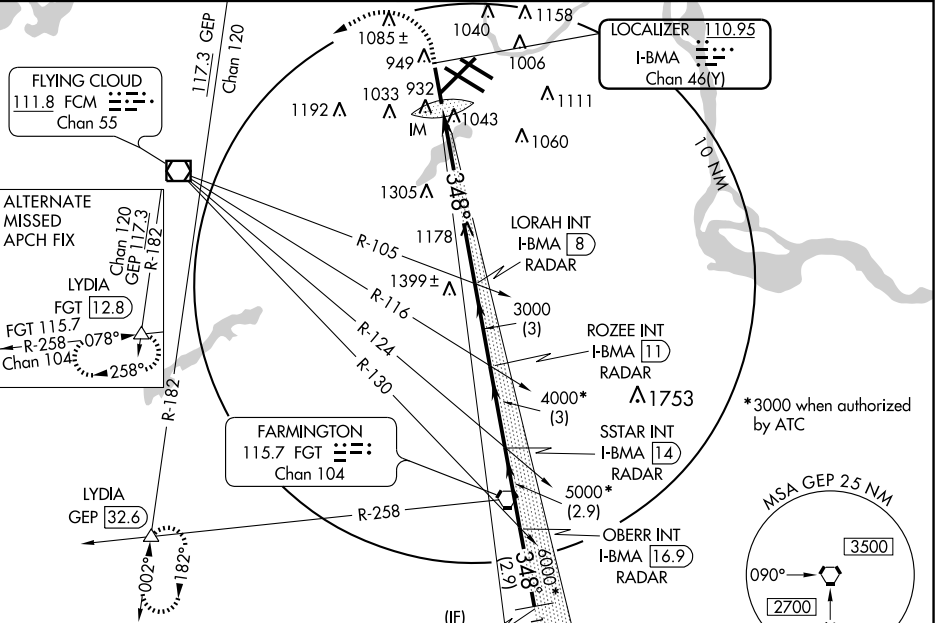
NC-1 17 DEC 2009 to 14 JAN 2010

LOC/DME I-BMA	APP CRS	Rwy Idg	8000
110.95	348°	TDZE	834
Chan 46(Y)		Apt Elev	841

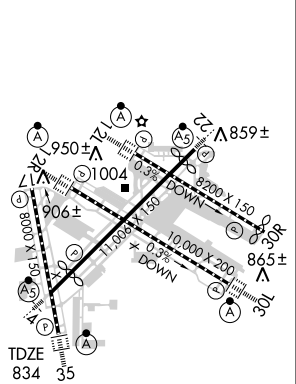
ILS RWY 35 (CAT II)

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

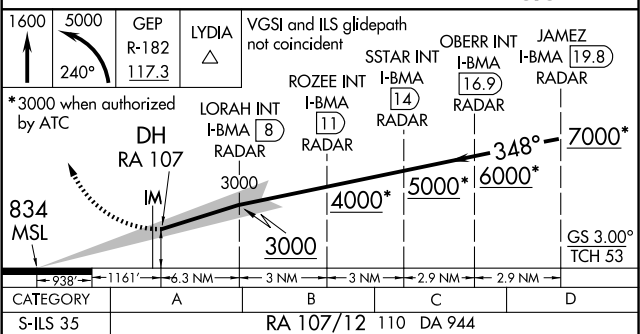
ATIS ARR 135.35 239.275 DEP 120.8	MINNEAPOLIS APP CON 119.3 335.5	MINNEAPOLIS TOWER 123.95 273.55 (12L-30R) 126.7 273.55 (12R-30L, 4-22) 123.675 273.55 (17-35)	GND CON N 121.8 348.6 S 121.9 348.6 W 127.925	CLNC DEL 133.2



ELEV 841	D
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RADAR REQUIRED



HIRL all Rwy's
REIL Rwy's 17 and 30R
TDZ/CL Rwy's 12L, 12R, 30L, and 35

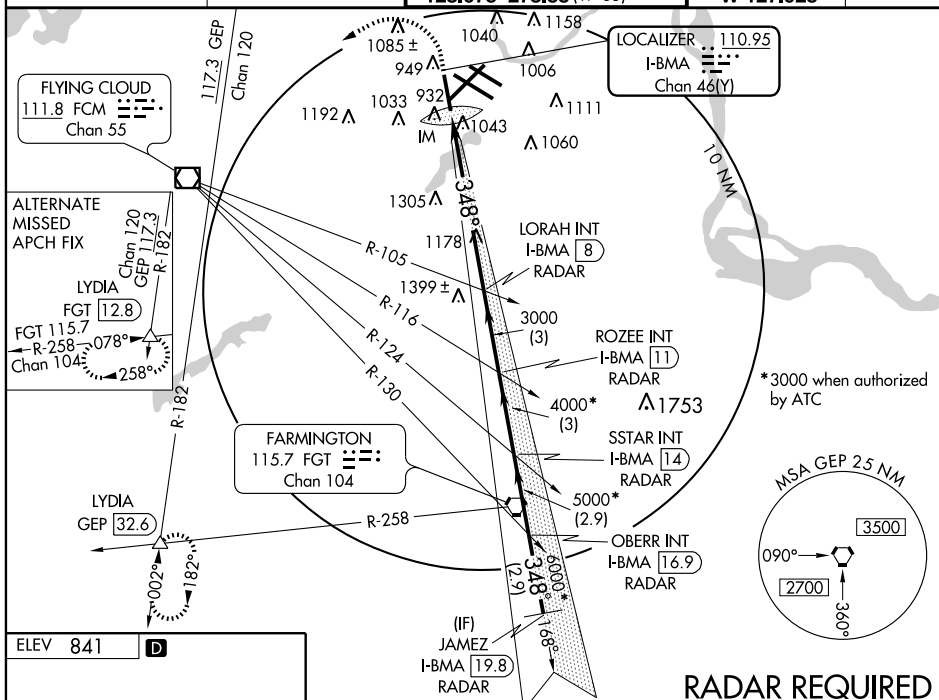
CATEGORY II ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

LOC/DME -BMA 110.95 Chan 46 (Y)	APP CRS 348°	Rwy Idg TDZE Apt Elev	8000 834 841
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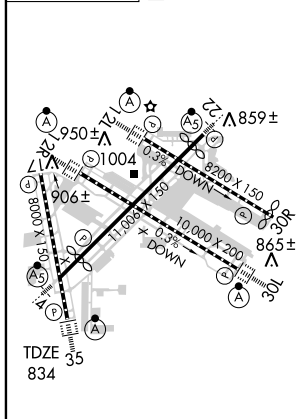
ILS RWY 35 (CAT III)

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

<div><div><div>V</div><div>A</div></div></div>		ALSF-2 <div><div>A</div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div><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ELEV 841

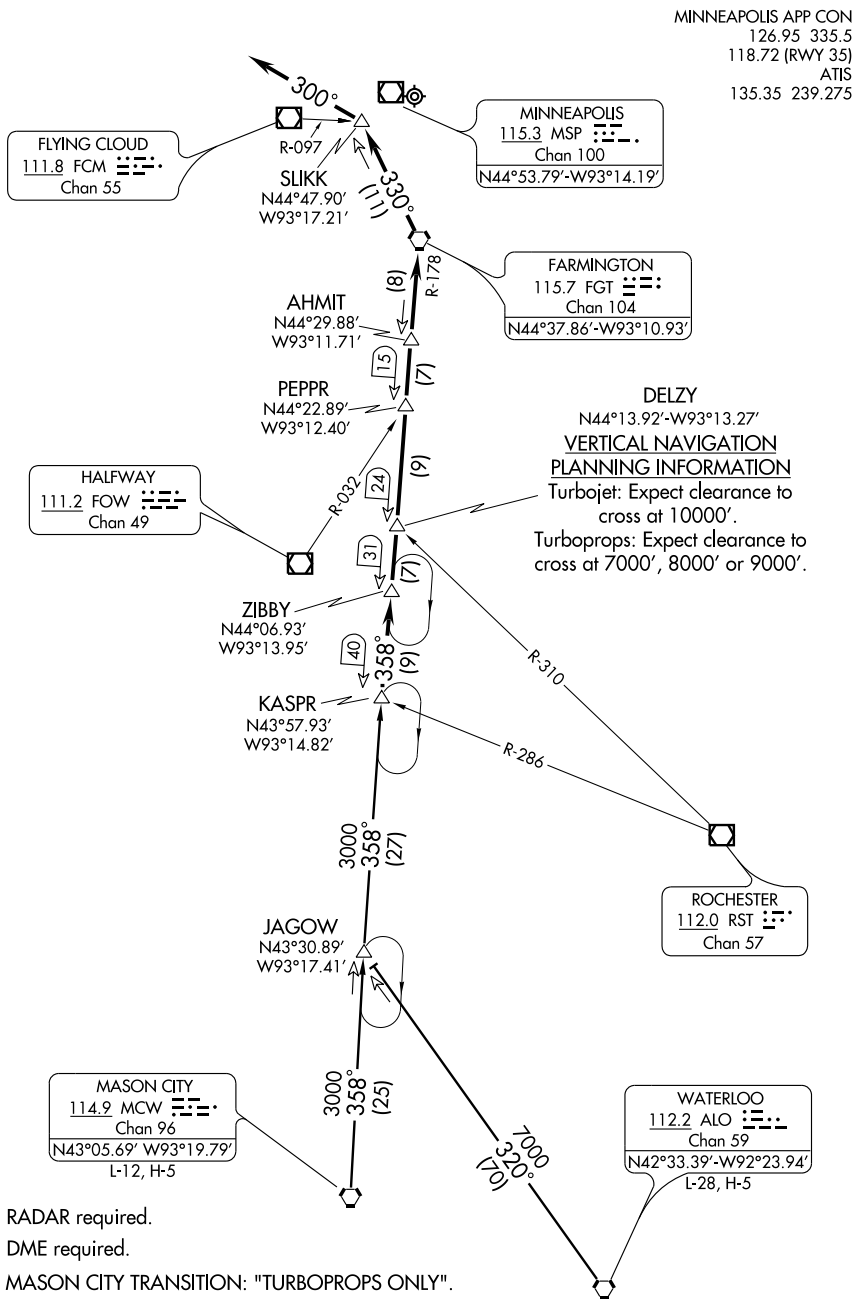


HIRL all Rwy's
 REIL Rwy's 17 and 30R
 TDZ/CL Rwy's 12L, 12R, 30L, and 35

RADAR REQUIRED

1600 ↑ 240°	5000 ↓ 240°	GEP R-182 117.3	LYDIA △	VGSI and ILS glidepath not coincident	SSTAR INT I-BMA 14 RADAR	ROZEE INT I-BMA 11 RADAR	LORAH INT I-BMA 8 RADAR	OBERR INT I-BMA 16.9 RADAR	JAMEZ I-BMA 19.8 RADAR
3000 when authorized by ATC				7000					
834 MSL				348°					
938				3000					
1021				4000*					
6.4 NM				5000*					
3 NM				6000*					
3 NM				GS 3.00°					
2.9 NM				TCH 53					
2.9 NM									
CATEGORY	A	B	C	D					
S-ILS 35	CAT IIIa		RVR 07						
S-ILS 35	CAT IIIb		RVR 06						
S-ILS 35	CAT IIIc		NA						

**CATEGORY III ILS - SPECIAL AIRCREW
 & AIRCRAFT CERTIFICATION REQUIRED**



NOTE: RADAR required.

NOTE: DME required.

NOTE: MASON CITY TRANSITION: "TURBOPROPS ONLY".

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)

NC-1. 17 DEC 2009 to 14 JAN 2010

ARRIVAL DESCRIPTION

MASON CITY TRANSITION (MCW.KASPR3) (TURBOPROP ONLY): From over MCW VORTAC via MCW R-358 to KASPR INT. Thence....

WATERLOO TRANSITION (ALO.KASPR3): From over ALO VORTAC via ALO R-320 to JAGOW INT, then via MCW R-358 to KASPR INT. Thence....

....From over KASPR INT via FGT R-178 to FGT VORTAC.

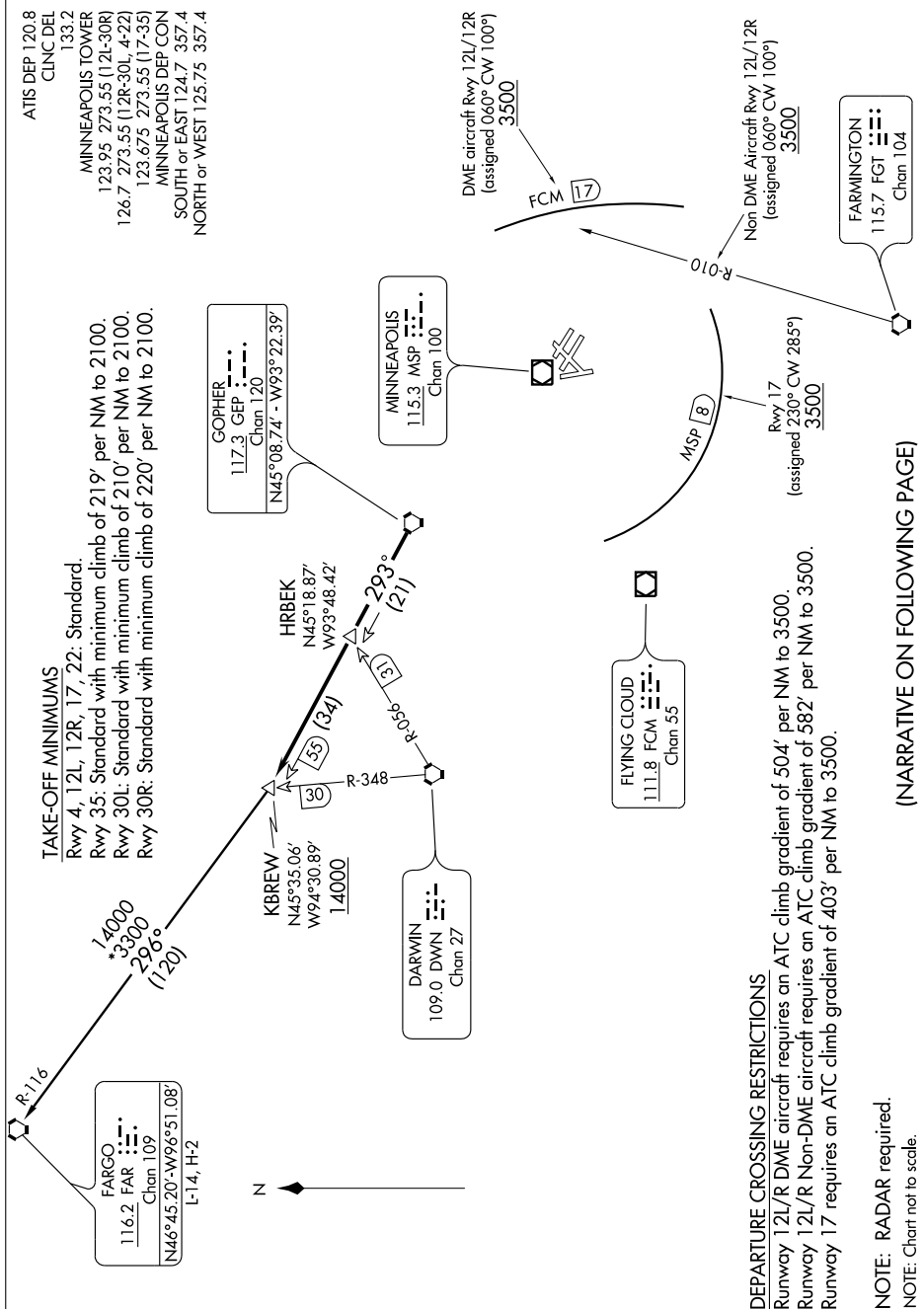
LANDING RUNWAYS 12L/R:

After FGT VORTAC via FGT R-330 to SLIKK INT thence via 300° heading for radar vectors to final approach course.

ALL OTHER RUNWAYS:

Via radar vectors to final approach course.

KBREW TWO DEPARTURE



(NARRATIVE ON FOLLOWING PAGE)



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Fly assigned heading for radar vectors to GEP VORTAC then via GEP R-293 to KBREW INT/GEP 55 DME. Turbojet aircraft maintain 7000 or lower assigned altitude, all other aircraft maintain 5000 or lower assigned altitude.

DME EQUIPPED AIRCRAFT RWY 12L/12R DEPARTURES: Initially assigned heading 060° clockwise to 100°, cross FCM 17 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence. . . .

TAKE-OFF RUNWAY 17: Initially assigned heading 230° clockwise to 285° cross MSP 8 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence...

NON DME EQUIPPED AIRCRAFT RWY 12L/12R DEPARTURES: Initially assigned heading 060° clockwise to 100°, cross FGT R-010 at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence. . . .

TAKE-OFF RUNWAYS 4, 22, 30L/R, 35: Initially assigned heading, thence. . . .

. . . . via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

FARGO TRANSITION (KBREW2.FAR): From over KBREW INT via FAR R-116 to FAR VORTAC.

TAKE-OFF OBSTACLE NOTES

RWY 4: Multiple trees beginning 800' from DER, 264' left of centerline, up to 75' AGL/921' MSL.

Rod on building 2528' from DER, 1175' left of centerline, 78' AGL/922' MSL.

Fence 803' from DER, 585' left of centerline, 15' AGL/860' MSL.

Antenna on OL building 456' from DER, 319' left of centerline, 13' AGL/850' MSL.

Light poles 1932' from DER, 718' left of centerline, 45' AGL/885' MSL.

Stack 4535' from DER, 481' left of centerline, 139' AGL/949' MSL.

RWY 22: Tree 2906' from DER, 833' right of centerline, 94' AGL/934' MSL.

Hopper 1716' from DER, 456' left of centerline, 48' AGL/888' MSL.

RWY 30L: Multiple trees beginning 1113' from DER, 701' left of centerline, up to 80' AGL/919' MSL.

Tree 1230' from DER, 633' right of centerline, 30' AGL/877' MSL.

Ground 28' from DER, 490' right of centerline, 0' AGL/844' MSL.

RWY 17: Antenna 1272' from DER, 562' right of centerline, 57' AGL/891' MSL.

Pole 409' from DER, 530' right of centerline, 29' AGL/866' MSL.

Wind direction indicator on building 2619' from DER, 881' left of centerline, 97' AGL/918' MSL.

Building 2619' from DER, 859' left of centerline, 84' AGL/905' MSL.

Light 1176' from DER, 291' right of centerline, 11' AGL/875' MSL.

Tree 2619' from DER, on centerline, 79' AGL/900' MSL.

RWY 30R: Building 1056' from DER, 198' left of centerline, 13' AGL/853' MSL.

Multiple trees beginning 3010' from DER, 334' left of centerline, up to 94' AGL/940' MSL.

Light pole 1849' from DER, 698' right of centerline, 17' AGL/871' MSL.

Fence 1327' from DER, 667' right of centerline, 8' AGL/ 857' MSL.

Tree 3703' from DER, 350' right of centerline, 67' AGL/ 914' MSL.

Rod on pole 3143' from DER, 47' right of centerline, 38' AGL/898' MSL.

RWY 35: Tree 175' from DER, 398' right of centerline, 73' AGL/883' MSL.

Multiple trees beginning 1989' from DER, 351' left of centerline, up to 65' AGL/902' MSL.

Multiple buildings beginning 5.5 NM from DER, 1787' left of centerline, up to 811' AGL/1743' MSL.

RWY 12R: Multiple trees beginning 1477' from DER, 407' left of centerline, up to 86' AGL/851' MSL.

Multiple trees beginning 1426' from DER, 124' right of centerline, up to 111' AGL/847' MSL.

Light pole 1408' from DER, 746' right of centerline, 85' AGL/843' MSL.

Radar reflector 983' from DER, 32' left of centerline, 15' AGL/829' MSL.

Pipe on building 826' from DER, 576' left of centerline, 10' AGL/825' MSL.

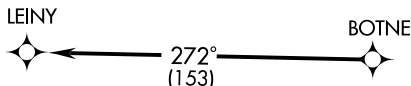
OL on LOC 766' from DER, on centerline, 7' AGL/821' MSL.

LEINY TWO DEPARTURE (RNAV)

SL-264 (FAA)

MINNEAPOLIS, MINNESOTA

ATIS DEP 120.8
 CLNC DEL
 133.2
 MINNEAPOLIS TOWER
 123.95 273.55 (12L-30R)
 126.7 273.55 (12R-30L, 4-22)
 123.675 273.55 (17-35)
 MINNEAPOLIS DEP CON
 SOUTH or EAST 124.7 357.4
 NORTH or WEST 125.75 357.4



NOTE: DME/DME/IRU required.
 NOTE: RNAV 1.
 NOTE: RADAR required.

TAKE-OFF MINIMUMS:

Rwy 4, 22, 12L, 12R, 17 : Standard.

Rwy 35: Standard with minimum climb of 219 feet per NM to 2100.

Rwy 30L: Standard with minimum climb of 210 feet per NM to 2100.

Rwy 30R: Standard with minimum climb of 220 feet per NM to 2100.

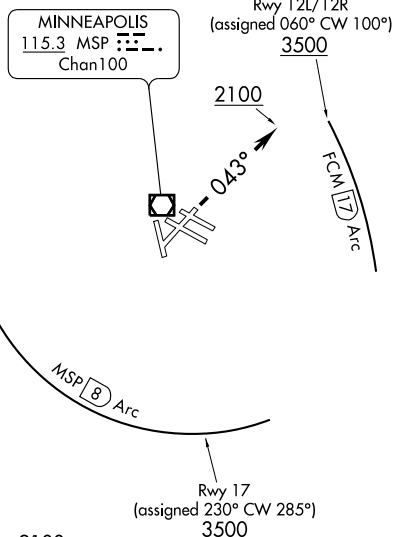
DEPARTURE CROSSING RESTRICTIONS:

Runway 12L/R requires an ATC climb gradient of 504' per NM to 3500.

Runway 17 requires an ATC climb gradient of 367' per NM to 3500.

NOTE: Chart not to scale.

(NOTES CONTINUED ON FOLLOWING PAGE)



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAY 4: Climb heading 043° to 2100. Thence....

TAKE-OFF RUNWAYS 12L/12R: Initially assigned heading 060° clockwise to 100°, cross FCM VOR/DME 17 DME Arc at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence....

TAKE-OFF RUNWAY 17: Initially assigned heading 230° clockwise to 285°, cross MSP VOR/DME 8 DME Arc at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence....

TAKE-OFF RUNWAYS 22, 35, 30L/R: Climb on assigned heading for radar vectors. Thence...

...expect radar vectors to BOTNE, then via 272° track to LEINY. Turbojet aircraft maintain 7000 or lower assigned altitude, all other aircraft maintain 5000 or lower assigned altitude. Expect filed altitude/flight level 10 minutes after departure.

TAKE-OFF OBSTACLE NOTES

RWY 4: Multiple trees beginning 800' from DER, 264' left of centerline, up to 75' AGL/921' MSL.

Rod on building 2528' from DER, 1175' left of centerline, 78' AGL/922' MSL.

Fence 803' from DER, 585' left of centerline, 15' AGL/860' MSL.

Ant on OL building 456' from DER, 319' left of centerline, 13' AGL/850' MSL.

LT poles 1932' from DER, 718' left of centerline, 45' AGL/885' MSL.

Stack 4535' from DER, 481' left of centerline, 139' AGL/949' MSL.

RWY 22: Tree 2906' from DER, 833' right of centerline, 94' AGL/934' MSL.

Hopper 1717' from DER, 456' left of centerline, 48' AGL/888' MSL.

RWY 30L: Multiple trees beginning 1113' from DER, 701' left of centerline, up to 80' AGL/919' MSL.

Tree 1230' from DER, 633' right of centerline, 30' AGL/877' MSL.

Ground 28' from DER, 490' right of centerline, 0' AGL/844' MSL.

RWY 17: Antenna 1272' from DER, 562' right of centerline, 57' AGL/891' MSL.

Pole 409' from DER, 530' right of centerline, 29' AGL/866' MSL.

Wind direction indicator on bldg 2619' from DER, 881' left of centerline, 97' AGL/918' MSL.

Bldg 2619' from DER, 859' left of centerline, 84' AGL/905' MSL.

LT 1176' from DER, 291' right of centerline, 11' AGL/875' MSL.

Tree 2619' from DER, on centerline, 79' AGL/900' MSL.

RWY 30R: Bldg 1056' from DER, 198' left of centerline, 13' AGL/853' MSL.

Multiple trees beginning 3010' from DER, 334' left of centerline, up to 94' AGL/940' MSL.

LT pole 1849' from DER, 698' right of centerline, 17' AGL/871' MSL.

Fence 1327' from DER, 667' right of centerline, 8' AGL/857' MSL.

Tree 3703' from DER, 350' right of centerline, 67' AGL/914' MSL.

Rod on pole 3143' from DER, 47' right of centerline, 38' AGL/898' MSL.

RWY 35: Tree 175' from DER, 398' right of centerline, 73' AGL/883' MSL.

Multiple trees beginning 1989' from DER, 351' left of centerline, up to 65' AGL/902' MSL.

Multiple buildings beginning 5.45 NM from DER, 1787' left of centerline, up to 811' AGL/1743' MSL.

RWY 12R: Multiple trees beginning 1477' from DER, 407' left of centerline, up to 86' AGL/851' MSL.

Multiple trees beginning 1426' from DER, 124' right of centerline, up to 111' AGL/847' MSL.

LT pole 1408' from DER, 746' right of centerline, 85' AGL/843' MSL.

Radar reflector 983' from DER, 32' left of centerline, 15' AGL/829' MSL.

Pipe on bldg, 826' from DER, 576' left of centerline, 10' AGL/825' MSL.

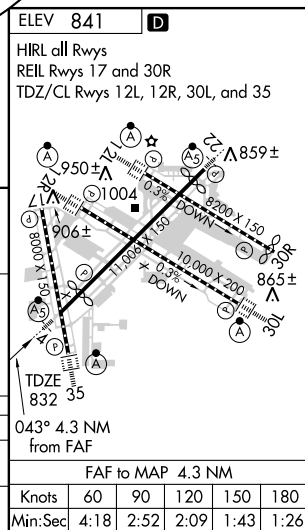
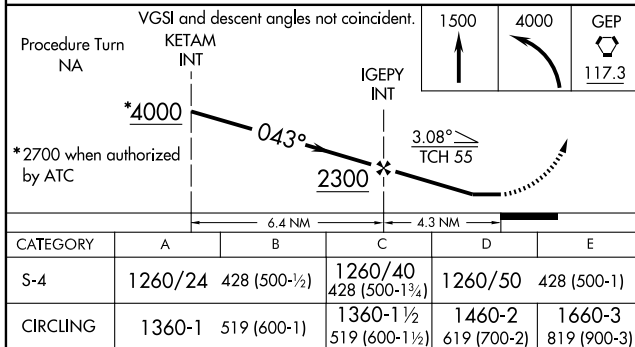
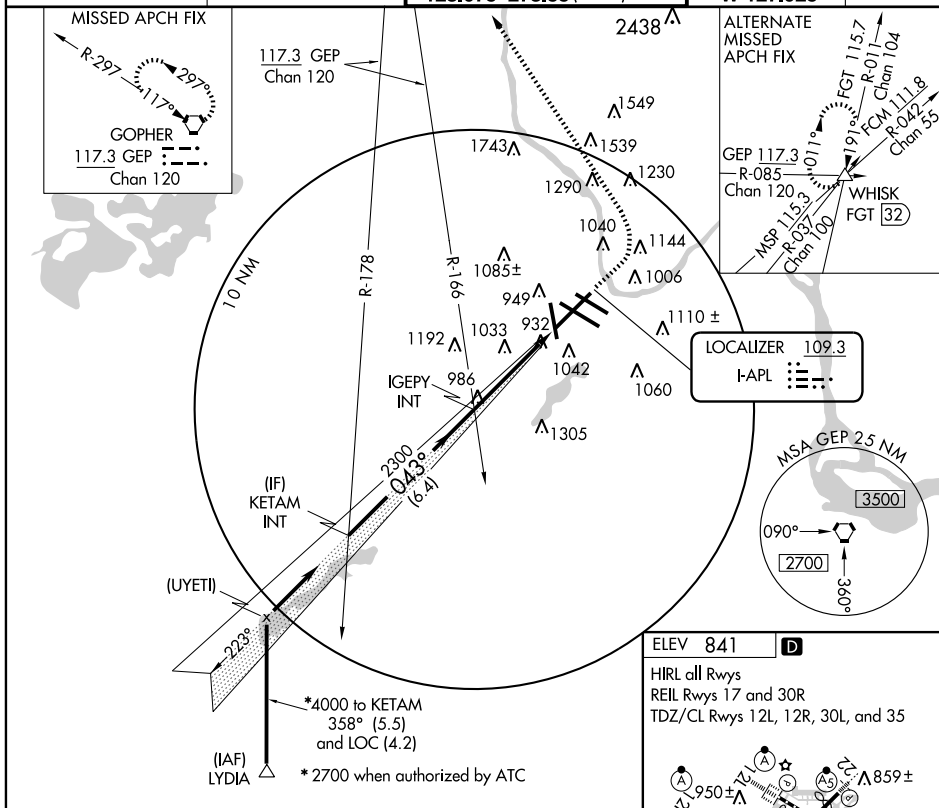
OL on LOC 766' from DER, on centerline, 7' AGL/821' MSL.

LOC RWY 4

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

LOC I-APL 109.3	APP CRS 043°	Rwy Idg TDZE Apt Elev	9456 832 841
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ATIS ARR 135.35 239.275 DEP 120.8		MINNEAPOLIS APP CON 119.3 335.5	MINNEAPOLIS TOWER 123.95 273.55 (12L-30R) 126.7 273.55 (12R-30L, 4-22) 123.675 273.55 (17-35)	GND CON N 121.8 348.6 S 121.9 348.6 W 127.925	CLNC DEL 133.2
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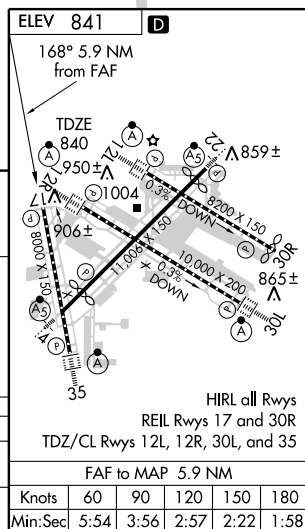
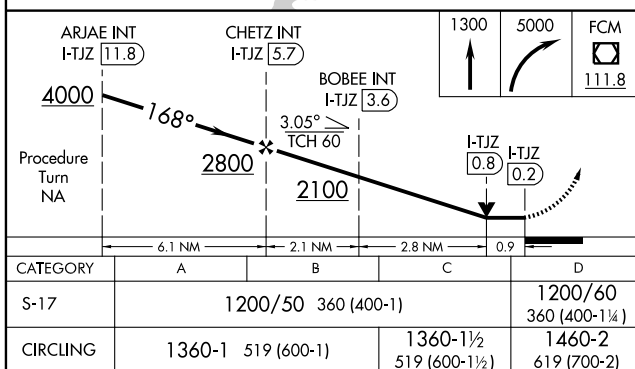
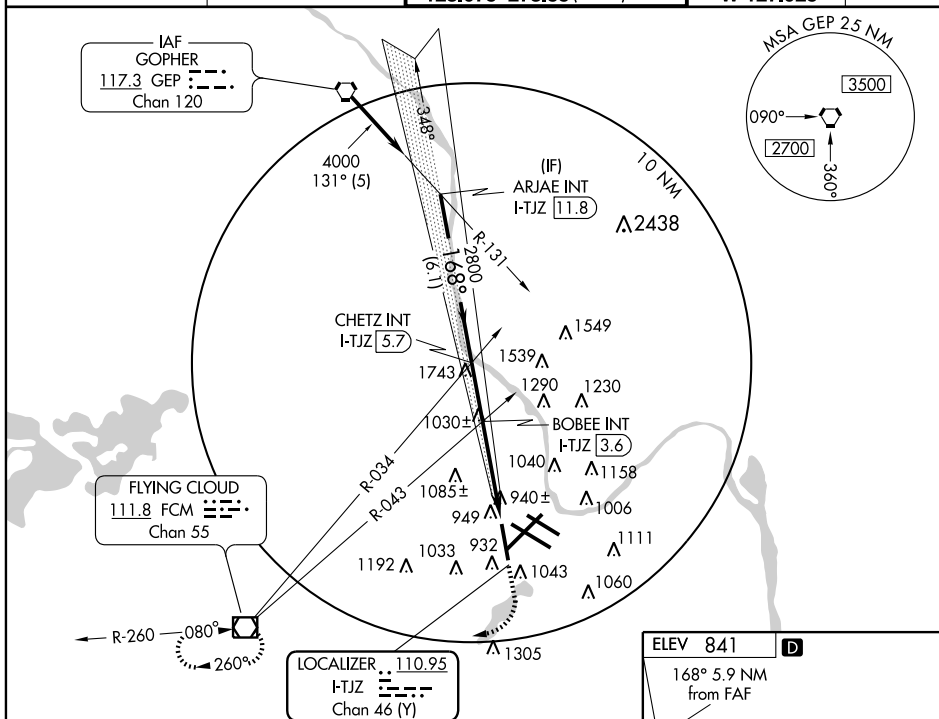
LOC/DME I-TJZ 110.95 Chan 46(Y)	APP CRS 168°	Rwy Idg TDZE Apt Elev	8000 840 841
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LOC RWY 17

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

ATIS ARR 135.35 239.275 DEP 120.8		MINNEAPOLIS APP CON 119.3 335.5	MINNEAPOLIS TOWER 123.95 273.55 (12L-30R) 126.7 273.55 (12R-30L, 4-22) 123.675 273.55 (17-35)	GND CON N 121.8 348.6 S 121.9 348.6 W 127.925	CLNC DEL 133.2
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MISSED APPROACH: Climb to 1300 then climbing right turn to 5000 direct FCM VOR/DME and hold.



LOC RWY 22

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

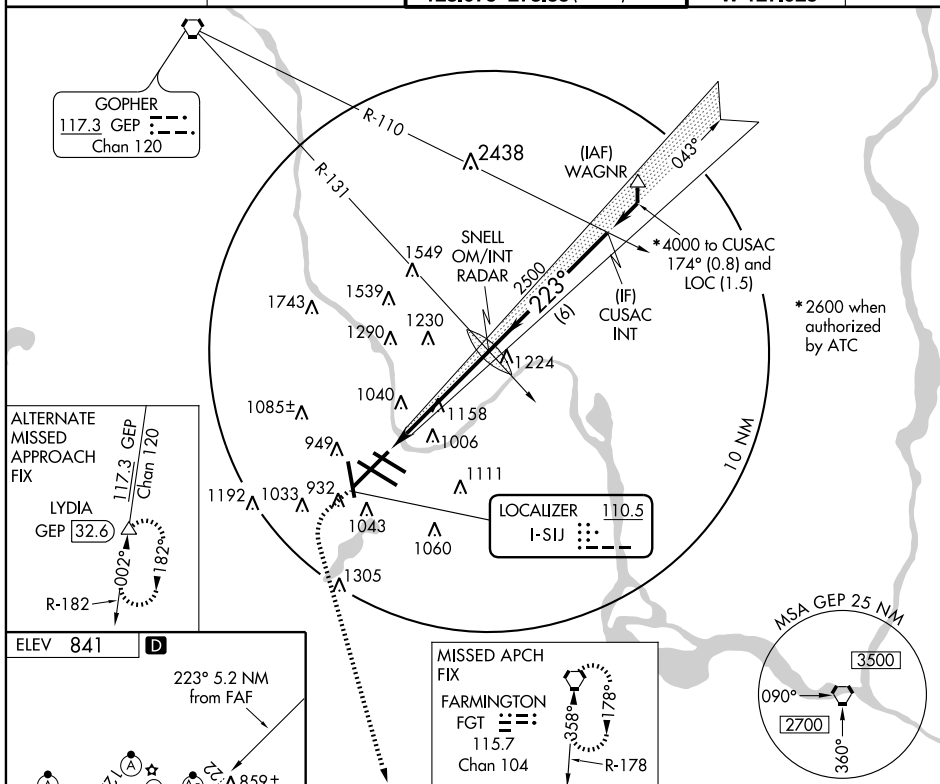
LOC I-SIJ 110.5	APP CRS 223°	Rwy Idg TDZE Apt Elev	10018 828 841
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For inoperative MALSR increase S-22 Cat A and B visibility to RVR 5000 and Cat E visibility to 2 miles.

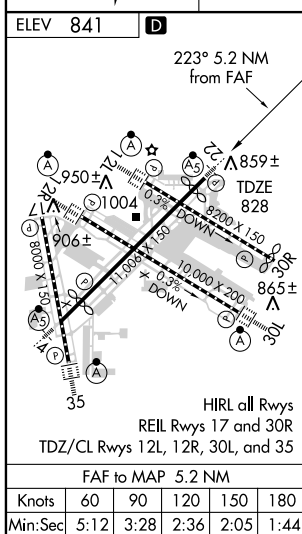
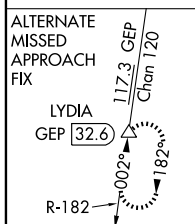


MISSED APPROACH: Climb to 2000 then climbing left turn to 4000 direct FGT VORTAC and hold.

ATIS ARR 135.35 239.275 DEP 120.8	MINNEAPOLIS APP CON 119.3 335.5	MINNEAPOLIS TOWER 123.95 273.55 (12L-30R) 126.7 273.55 (12R-30L, 4-22) 123.675 273.55 (17-35)	GND CON N 121.8 348.6 S 121.9 348.6 W 127.925	CLNC DEL 133.2
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*2600 when authorized by ATC



ELEV 841	D	223° 5.2 NM from FAF	MISSED APCH FIX FARMINGTON FGT 115.7 Chan 104	R-178	MSA GEP 25 NM 3500 2700	090° 360°
2000	4000	FGT 115.7	SNELL OM/INT RADAR	CUSAC INT	Procedure Turn NA	
2500	223°	4000	2500	223°	4000	
5.2 NM	6 NM					
CATEGORY	A	B	C	D	E	
S-22	1420/40 592 (600-¾)	1420/50 592 (600-1)	1420/60 592 (600-1¼)	1420/60 592 (600-1½)	1420-1½ 592 (600-1½)	
CIRCLING	1420-1 579 (600-1)	1420-1½ 579 (600-1½)	1460-2 619 (700-2)	1660-3 819 (900-3)		

TAKEOFF MINIMUMS:

Rwy 17: Standard with minimum ATC climb of
240' per mile to 5000.

All other runways: NA - ATC request.

ATIS DEP 120.8

CLNCL DEL

133.2

MINNEAPOLIS TOWER

123.95 273.55 (12L-30R)

126.7 273.55 (12R-30L, 4-22)

123.675 273.55 (17-35)

MINNEAPOLIS DEP CON

SOUTH or EAST 124.7 357.4

NORTH or WEST 125.75 357.4

FARGO
116.2 FAR
Chan 109
N46°45.20'-W96°51.08'
L-14, H-2

BRAINERD
116.9 BRD
Chan 116
N46°20.90'-W94°01.56'
L-14, H-2

DULUTH
112.6 DLH
Chan 73
N46°48.13'-W92°12.17'
L-14, H-2

GREEN BAY
115.5 GRB
Chan 102
N44°33.31'-W88°11.69'
L-31, H-2

ABERDEEN
113.0 ABR
Chan 77
N45°25.04'-W98°22.12'
L-14, H-2

MINNEAPOLIS
115.3 MSP
Chan 100
N44°53.79'-W93°14.19'
L-12-14, H-2

FARMINGTON
115.7 FGT
Chan 104
N44°37.86'-W93°10.92'
L-12-14, H-2

RAPID CITY
112.3 RAP
Chan 70
N43°58.56'-W103°00.74'
L-12, H-2

FLYING CLOUD
111.8 FCM
Chan 55
N44°49.54'-W93°27.41'
L-12-14, H-2

NODINE
117.9 ODI
Chan 126
N43°54.74'-W91°28.06'
L-28, H-2

SIoux FALLS
115.0 FSD
Chan 97
N43°38.97'-W96°46.87'
L-12, H-5

FORT DODGE
113.5 FOD
Chan 82
N42°36.67'-W94°17.69'
L-12, H-5

ROCHESTER
112.0 RST
Chan 57
N43°46.98'-W92°35.80'
L-12-28, H-2

DELLS
117.0 DLL
Chan 117
N43°33.05'-W89°45.82'
L-28, H-5

O'NEILL
113.9 ONL
Chan 86
N42°28.23'-W98°41.22'
L-12, H-5

OMAHA
116.3 OVR
Chan 110
N41°10.04'-W95°44.20'
L-10-12, H-5

DES MOINES
117.5 DSM
Chan 122
N41°26.22'-W93°38.92'
L-12-27, H-5

ST JOSEPH
115.5 STJ
Chan 102
N39°57.63'-W94°55.51'
L-10, H-5

KANSAS CITY
113.25 MCI
Chan 79 (Y)
N39°17.12'-W94°44.22'
L-10, H-5

TAKE-OFF OBSTACLE NOTES

RWY 17: Building 199' from DER, 496' left of centerline, 67' AGL/898' MSL.

Multiple poles beginning 188' from DER, 240' right of centerline, up to 160' AGL/866' MSL.

Wind direction indicator on building 2619' from DER, 881' left of centerline, 97' AGL/918' MSL.

Building 2619' from DER, 859' left of centerline, 84' AGL/905' MSL.

Building 2336' from DER, 385' right of centerline, 154' AGL/983' MSL.

NOTE: RADAR required.

NOTE: Chart not to scale.

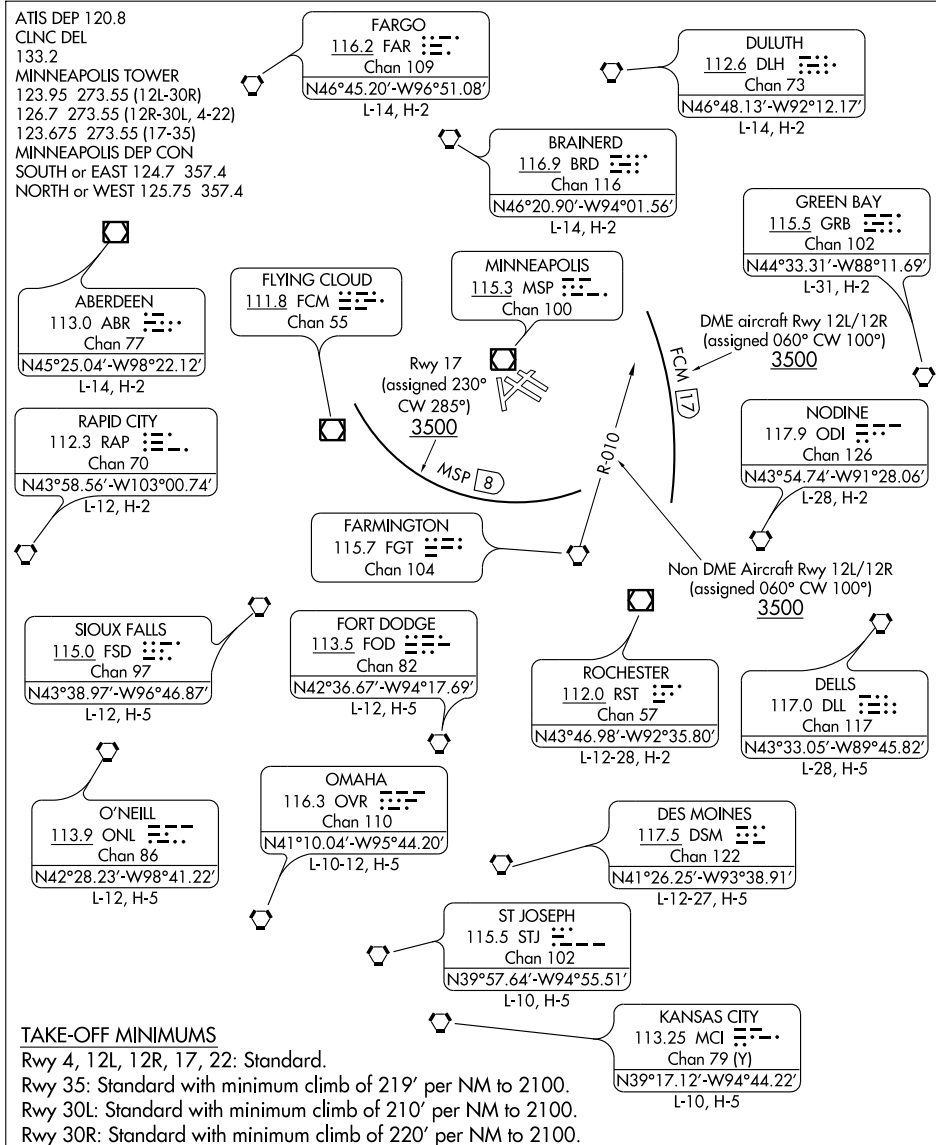
DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAY 17: Climb via 170° to HUSHH/MSP VOR/DME 3.5 DME then right turn via 245° and continue climb (turbojet aircraft maintain 7000 or lower as assigned, all other aircraft maintain 5000 or lower as assigned). Then via vectors to assigned route/fix, expect clearance to assigned altitude/flight level 10 minutes after departure.

MINNEAPOLIS THREE DEPARTURE

SL-264 (FAA)

MINNEAPOLIS, MINNESOTA



(NARRATIVE ON FOLLOWING PAGE)

NOTE: Chart not to scale.



DEPARTURE ROUTE DESCRIPTION

ALL AIRCRAFT: Expect radar vectors to join filed/assigned route. Turbojet aircraft maintain 7000 or lower assigned altitude. All other aircraft maintain 5000 or lower assigned altitude. Expect clearance to assigned altitude/flight level 10 (ten) minutes after departure.

DME EQUIPPED AIRCRAFT RWY 12L/12R DEPARTURES: Initially assigned heading 060° clockwise to 100°, cross FCM 17 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure.

NON-DME EQUIPPED AIRCRAFT RWY 12L/12R DEPARTURES: Initially assigned heading 060° clockwise to 100°, cross FGT R-010 at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure.

TAKE-OFF RUNWAY 17: Initially assigned heading 230° clockwise to 285° cross MSP 8 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure.

TAKE-OFF OBSTACLE NOTES

RWY 4: Multiple trees beginning 800' from DER, 264' left of centerline, up to 75' AGL/921' MSL.

Rod on building 2528' from DER, 1175' left of centerline, 78' AGL/922' MSL.

Fence 803' from DER, 585' left of centerline, 15' AGL/860' MSL.

Antenna on OL building 456' from DER, 319' left of centerline, 13' AGL/850' MSL.

Light poles 1932' from DER, 718' left of centerline, 45' AGL/885' MSL.

Stack 4535' from DER, 481' left of centerline, 139' AGL/949' MSL.

RWY 22: Tree 2906' from DER, 833' right of centerline, 94' AGL/934' MSL.

Hopper 1716' from DER, 456' left of centerline, 48' AGL/888' MSL.

Tree 1230' from DER, 633' right of centerline, 30' AGL/877' MSL.

Ground 28' from DER 490' right of centerline, 0' AGL/844' MSL.

RWY 17: Antenna 1272' from DER, 562' right of centerline, 57' AGL/891' MSL.

Pole 409' from DER, 530' right of centerline, 29' AGL/866' MSL.

Wind direction indicator on building 2619' from DER, 881' left of centerline, 97' AGL/918' MSL.

Building 2619' from DER, 859' left of centerline, 84' AGL/905' MSL.

Light 1176' from DER, 291' right of centerline, 11' AGL/875' MSL.

Tree 2619' from DER, on centerline, 79' AGL/900' MSL.

RWY 30L: Multiple trees beginning 1113' from DER, 701' left of centerline, up to 80' AGL/919' MSL.

Tree 1230' from DER, 633' right of centerline, 30' AGL/877' MSL.

Ground 28' from DER, 490' right of centerline 0' AGL/844' MSL.

RWY 30R: Building 1056' from DER, 198' left of centerline, 13' AGL/853' MSL.

Multiple trees beginning 3010' from DER, 334' left of centerline, up to 94' AGL/940' MSL.

Light pole 1849' from DER, 698' right of centerline, 17' AGL/871' MSL.

Fence 1327' from DER, 667' right of centerline, 8' AGL/857' MSL.

Tree 3703' from DER, 350' right of centerline, 67' AGL/914' MSL.

Rod on pole 3143' from DER, 47' right of centerline, 38' AGL/898' MSL.

RWY 35: Tree 175' from DER, 398' right of centerline, 73' AGL/883' MSL.

Multiple trees beginning 1989' from DER, 351' left of centerline, up to 65' AGL/902' MSL.

Multiple buildings beginning 5.5 NM from DER, 1787' left of centerline, up to 811' AGL/1743' MSL.

RWY 12R: Multiple trees beginning 1477' from DER, 407' left of centerline, up to 86' AGL/851' MSL.

Multiple trees beginning 1426' from DER, 124' right of centerline, up to 111' AGL/847' MSL.

Light pole 1408' from DER, 746' right of centerline, 85' AGL/843' MSL.

Radar reflector 983' from DER, 32' left of centerline, 15' AGL/829' MSL.

Pipe on building, 826' from DER, 576' left of centerline, 10' AGL/825' MSL.

OL on LOC 766' from DER, on centerline, 7' AGL/821' MSL.

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Fly assigned heading for radar vectors to MSP R-208 to ORSKY INT/MSP 85 DME. Turbojet aircraft maintain 7000 or lower assigned altitude. All other aircraft maintain 5000 or lower assigned altitude.

TAKE-OFF RUNWAY 17: Initially assigned heading 230° clockwise to 285° cross MSP 8 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence. . . .

DME EQUIPPED AIRCRAFT RWY 12L/R DEPARTURES: Initially assigned heading 060° clockwise to 100°, cross FCM 17 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence. . . .

NON DME EQUIPPED AIRCRAFT RWY 12L/R DEPARTURES: Initially assigned heading 060° clockwise to 100°, cross FGT R-010 at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence. . . .

TAKE-OFF RUNWAYS 4, 22, 30L/R, 35: Initially assigned heading, Thence. . . .

. . . . via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

FORT DODGE TRANSITION (ORSKY3.FOD): From over ORSKY INT via FOD R-356 to FOD VORTAC.

OMAHA TRANSITION (ORSKY3.OVR): From over ORSKY INT via MSP R-208 to ONTIJ INT then via OVR R-015 to OVR VORTAC.

TAKE-OFF OBSTACLE NOTES

RWY 4: Multiple trees beginning 800' from DER, 264' left of centerline, up to 75' AGL/921' MSL.

Rod on building 2528' from DER, 1175' left of centerline, 78' AGL/922' MSL.

Fence 803' from DER, 585' left of centerline, 15' AGL/860' MSL.

Antenna on OL building 456' from DER, 319' left of centerline, 13' AGL/850' MSL.

Light poles 1932' from DER, 718' left of centerline, 45' AGL/885' MSL.

Stack 4535' from DER, 481' left of centerline, 139' AGL/949' MSL.

RWY 22: Tree 2906' from DER, 833' right of centerline, 94' AGL/934' MSL.

Hopper 1716' from DER, 456' left of centerline, 48' AGL/888' MSL.

RWY 17: Antenna 1272' from DER, 562' right of centerline, 57' AGL/891' MSL.

Pole 409' from DER, 530' right of centerline, 29' AGL/866' MSL.

Wind direction indicator on building 2619' from DER, 881' left of centerline, 97' AGL/918' MSL.

Building 2619' from DER, 859' left of centerline, 84' AGL/905' MSL.

Light 1176' from DER, 291' right of centerline, 11' AGL/875' MSL.

Tree 2619' from DER, on centerline, 79' AGL/900' MSL.

RWY 30L: Multiple trees beginning 1113' from DER, 701' left of centerline, up to 80' AGL/919' MSL.

Tree 1230' from DER, 633' right of centerline, 30' AGL/877' MSL.

Ground 28' from DER, 490' right of centerline 0' AGL/844' MSL.

RWY 30R: Building 1056' from DER, 198' left of centerline, 13' AGL/853' MSL.

Multiple trees beginning 3010' from DER, 334' left of centerline, up to 94' AGL/940' MSL.

Light pole 1849' from DER, 698' right of centerline, 17' AGL/871' MSL.

Fence 1327' from DER, 667' right of centerline, 8' AGL/857' MSL.

Tree 3703' from DER, 350' right of centerline, 67' AGL/914' MSL.

Rod on pole 3143' from DER, 47' right of centerline, 38' AGL/898' MSL.

RWY 35: Tree 175' from DER, 398' right of centerline, 73' AGL/883' MSL.

Multiple trees beginning 1989' from DER, 351' left of centerline, up to 65' AGL/902' MSL.

Multiple buildings beginning 5.5 NM from DER, 1787' left of centerline, up to 811' AGL/1743' MSL.

RWY 12R: Multiple trees beginning 1477' from DER, 407' left of centerline, up to 86' AGL/851' MSL.

Multiple trees beginning 1426' from DER, 124' right of centerline, up to 111' AGL/847' MSL.

Light pole 1408' from DER, 746' right of centerline, 85' AGL/843' MSL.

Radar reflector 983' from DER, 32' left of centerline, 15' AGL/829' MSL.

Pipe on building, 826' from DER, 576' left of centerline, 10' AGL/825' MSL.

OL on LOC 766' from DER, on centerline, 7' AGL/821' MSL.

APP CRS
043°

Rwy Idg
TDZE
Apt Elev

9456
832
841

RNAV (GPS) RWY 4

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

▽ For inoperative MALS, increase LNAV/VNAV and LNAV Cat. E visibility to 1¾.

▲ For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F).
DME/DME RNP-0.3 NA.

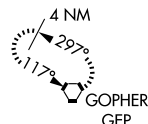
MALS



MISSED APPROACH: Climb to 4000 via 043° course to EPEWU WP then via 330° course to GEP VORTAC and hold.

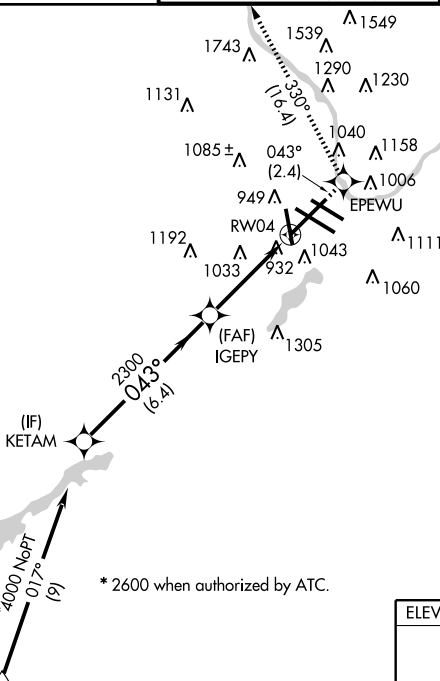
ATIS ARR 135.35 239.275 DEP 120.8	MINNEAPOLIS APP CON 119.3 335.5	MINNEAPOLIS TOWER 123.95 273.55 (12L-30R) 126.7 273.55 (12R-30L, 4-22) 123.675 273.55 (17-35)	GND CON N 121.8 348.6 S 121.9 348.6 W 127.925	CLNC DEL 133.2
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MISSED APCH FIX



MSA RW04 2.5 NM

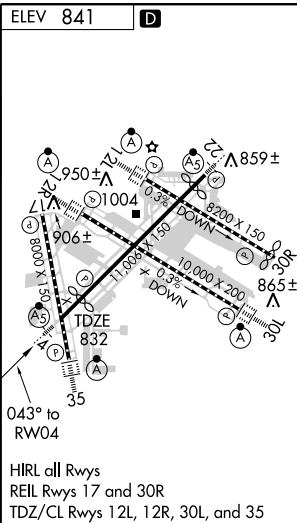
3500



* 2600 when authorized by ATC.

A1753

* 4000					
* 2600 when authorized by ATC.					
KETAM					
IGEPU					
EPEWU					
330° course					
GEP					
RW04					
Procedure Turn NA					
2300					
043°					
6.4 NM					
4.3 NM					
CATEGORY	A	B	C	D	E
GLS PA DA	NA				
LNAV/VNAV DA	1296/50 464 (500-1)				
LNAV MDA	1300/24 468 (500-½)	1300/40 468 (500-¾)	1300/50 468 (500-1)	1300/60 468 (500-1¼)	
CIRCLING	1360-1 519 (600-1)	1460-2 619 (700-2)	1660-3 819 (900-3)		



WAAS

CH 45525

W12B

APP CRS

119°

Rwy Idg

TDZE

Apt Elev

7620

839

841

DME/DME RNP-0.3 NA.

Baro-VNAV NA below -16°C (4°F).

For inoperative ALSF, increase LPV all Cats visibility to RVR 5000,

increase LNAV/VNAV Cat E visibility to 1½, increase LNAV Cat E

visibility to 2¼.

ALSF-2

MISSED APPROACH: Climb to 4000 direct JACKO and left turn via 011° track to WHISK and hold.

ATIS

ARR 135.35 239.275

DEP 120.8

MINNEAPOLIS APP CON

119.3 335.5

MINNEAPOLIS TOWER

123.95 273.55 (12L-30R)

126.7 273.55 (12R-30L, 4-22)

123.675 273.55 (17-35)

GND CON

N 121.8 348.6

S 121.9 348.6

W 127.925

CLNC DEL

133.2

ELEV 841

HIRL all Rwys
REIL Rwys 17 and 30R
TDZ/CL Rws 12L, 12R, 30L, and 35

*3000 when authorized by ATC.					
UBTYA		VGSI and RNAV glidepath not coincident.		4000	JACKO
*4000		WASHY		WHISK	
Procedure Turn NA		119°		011° track	
GS 3.00° TCH 54		3000		# 1.7 NM to RWY12L	
				# LNAV only	
		8.9 NM		4.8 NM	
				1.7 NM	
CATEGORY	A	B	C	D	E
LPV DA	1135/24 296 (300-½)				
LNAV/VNAV DA	1224/40 385 (400-¾)				
LNAV MDA	1460/24 621 (700-½)	1460/60 621 (700-1¼)	1460-1½ 621 (700-1½)	1460-1¾ 621 (700-1¾)	
CIRCLING	1460-1¼ 619 (700-1¼)	1460-1¾ 619 (700-1¾)	1460-2 619 (700-2)	1660-3 819 (900-3)	

NC-1. 17 DEC 2009 to 14 JAN 2010

RNAV (GPS) RWY 12R

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

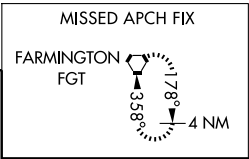
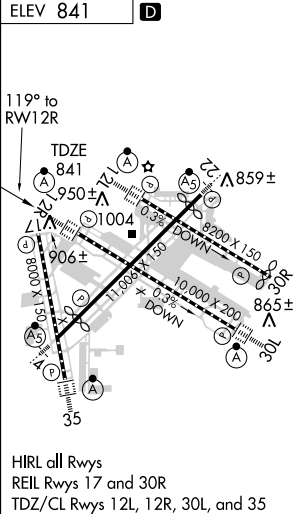
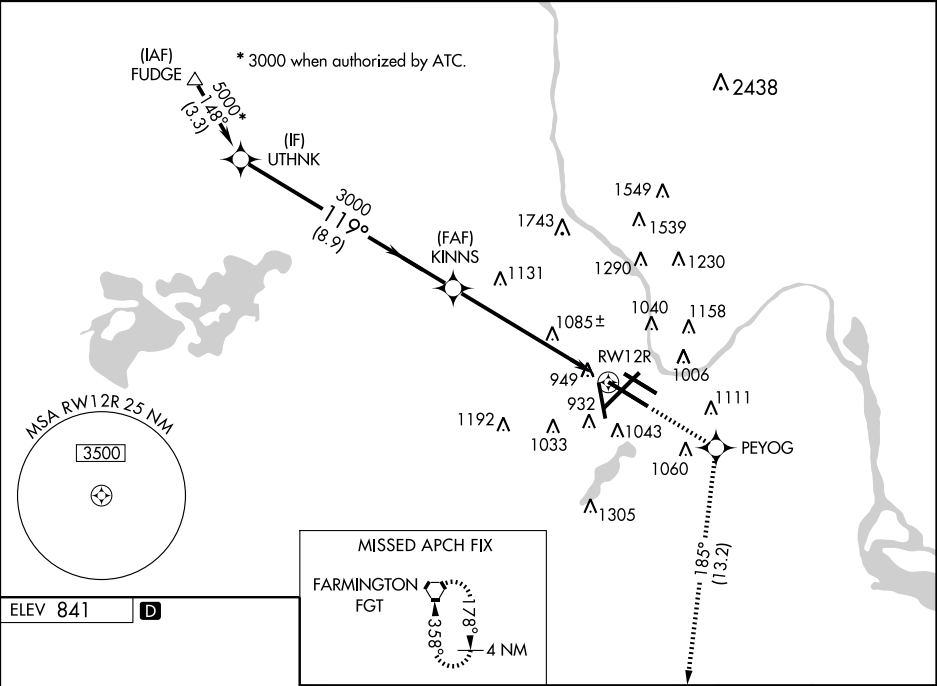
WAAS CH 50125 W12A	APP CRS 119°	Rwy Idg 10000 TDZE 841 Apt Elev 841
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⚠ DME/DME RNP- 0.3 NA.
⚠ Baro-VNAV NA below -16°C (4°F).
For inoperative ALSF, increase LPV all Cats visibility to RVR 5000,
increase LNAV/VNAV Cat E visibility to 1½, increase LNAV Cat E
visibility to 2 ¼.



MISSED APPROACH: Climb to 5000 direct
PEYOG and via 185° track to FGT VORTAC
and hold.

ATIS ARR 135.35 239.275 DEP 120.8	MINNEAPOLIS APP CON 119.3 335.5	MINNEAPOLIS TOWER 123.95 273.55 (12L-30R) 126.7 273.55 (12R-30L, 4-22) 123.675 273.55 (17-35)	GND CON N 121.8 348.6 S 121.9 348.6 W 127.925	CLNC DEL 133.2
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* 3000 when authorized by ATC.				
UTHNK	VGSI and RNAV glidepath not coincident	KINNS	5000	PEYOG
*5000		185° track		
Procedure Turn NA		FGT		
GS 3.00° TCH 56		#1.7 NM to RWY 12R		
119°		#LNAV only		
3000		RWY 12R		
8.9 NM		4.8 NM		
1.7 NM				
CATEGORY	A	B	C	D
LPV DA	1119/24 278 (300-½)			
LNAV/VNAV DA	1294/50 453 (500-1)			
LNAV MDA	1460/24 619 (700-½)	1460/60 619 (700-1¼)	1460-1½ 619 (700-1½)	1460-1¼ 619 (700-1¼)
CIRCLING	1460-1½ 619 (700-1½)	1460-1¼ 619 (700-1¼)	1460-2 619 (700-2)	1660-3 819 (900-3)

RNAV (GPS) RWY 22

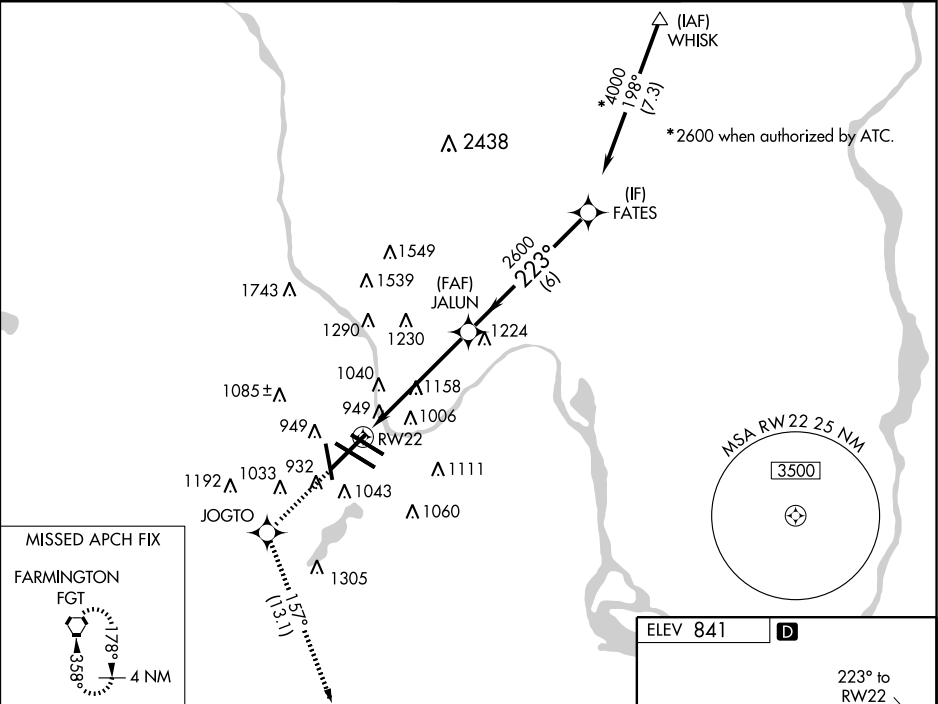
MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

WAAS CH 60927 W22A	APP CRS 223°	Rwy Idg TDZE 828 Apt Elev 841
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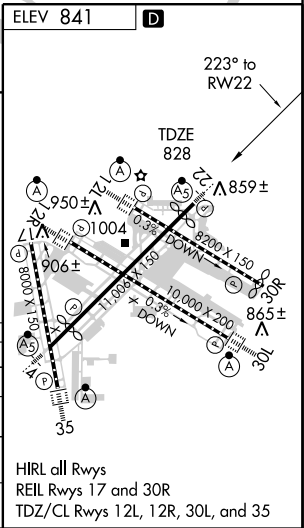
⚠ DME/DME RNP- 0.3 NA.
Baro-VNAV NA below -16°C (4°F).
For inoperative MALSR, increase LPV all CATS visibility to RVR 6000,
increase LNAV CAT A and B visibility to RVR 5000.

MALSR
AS
MISSED APPROACH: Climb to 4000 direct JOGTO and via 157° track to FGT VORTAC and hold.

ATIS ARR 135.35 239.275 DEP 120.8	MINNEAPOLIS APP CON 119.3 335.5	MINNEAPOLIS TOWER 123.95 273.55 (12L-30R) 126.7 273.55 (12R-30L, 4-22) 123.675 273.55 (17-35)	GND CON N 121.8 348.6 S 121.9 348.6 W 127.925	CLNC DEL 133.2
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4000	JOGTO	157° track	FGT	*2600 when authorized by ATC. VGSi and RNAV glidepath not coincident.	FATES
# LNAV only	#1.7 NM to RW22			JALUN	4000*
					Procedure Turn NA GS 3.00° TCH 55
	1.7 NM	3.6 NM	6 NM		
CATEGORY	A	B	C	D	E
LPV DA	1190/40 362 (400-¾)				
LNAV/VNAV DA	1227/40 399 (400-¾)				
LNAV MDA	1420/40 592 (600-¾)	1420/50 592 (600-1)	1420/60 592 (600-1½)	1420-1½ 592 (600-1½)	1227/50 399 (400-1)
CIRCLING	1420-1¼ 579 (600-1¼)	1420-1½ 579 (600-1½)	1460-2 619 (700-2)	1660-3 819 (900-3)	



RNAV (GPS) RWY 30L

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

WAAS CH 56225 W30A	APP CRS 299°	Rwy Idg TDZE 823 Apt Elev 841
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⚠ DME/DME RNP-0.3 NA. Baro-VNAV NA below -16°C (4°F).
⚠ For inoperative ALSF, increase LPV all Cats visibility to RVR 4000, increase LNAV/VNAV Cat E visibility to 1½. Increase LNAV Cat E visibility to 2¼.

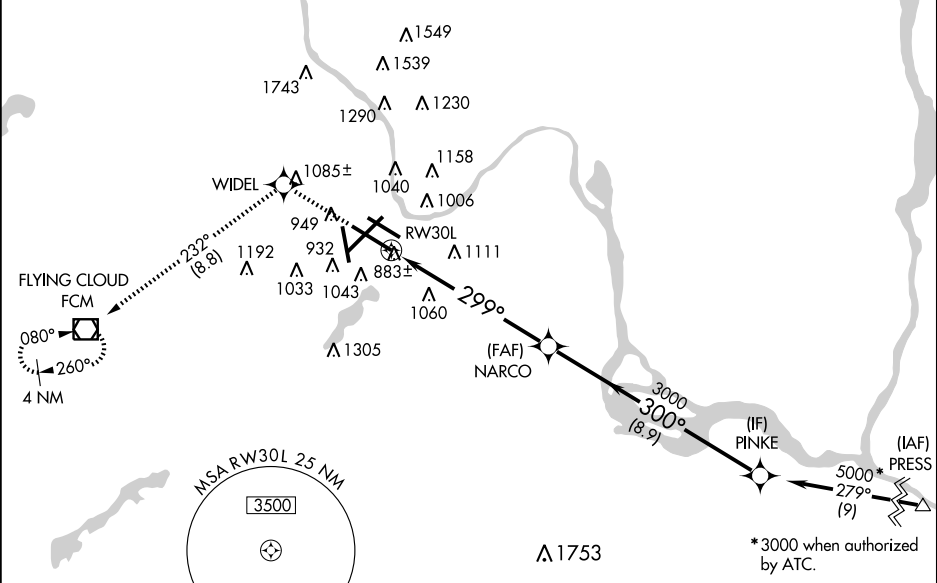
ALSF-2



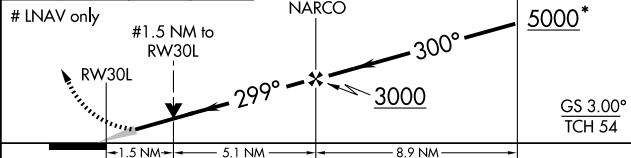
MISSED APPROACH: Climb to 4000 direct WIDEL and via 232° track to FCM VOR/DME and hold.

ATIS ARR 135.35 239.275 DEP 120.8	MINNEAPOLIS APP CON 119.3 335.5	MINNEAPOLIS TOWER 123.95 273.55 (12L-30R) 126.7 273.55 (12R-30L, 4-22) 123.675 273.55 (17-35)	GND CON N 121.8 348.6 S 121.9 348.6 W 127.925	CLNC DEL 133.2
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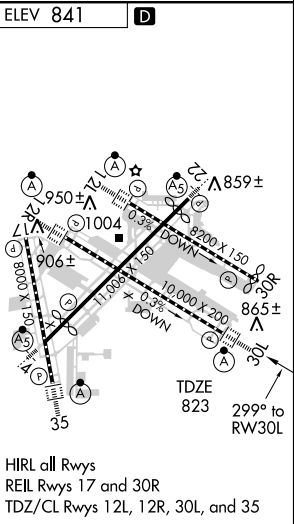
Procedure NA for arrivals at PRESS via V26 eastbound, V2-97 southeastbound.



4000 ↑	WIDEL ✧	232° track	FCM ◻	* 3000 when authorized by ATC. VGSI and RNAV glidepath not coincident	Procedure Turn NA
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CATEGORY	A	B	C	D	E
LPV DA	1073/24 250 (300-½)				
LNAV/VNAV DA	1295/60 472 (500-1¼)				
LNAV MDA	1360/24 537 (600-½)	1360/50 537 (600-1)	1360/60 537 (600-1¼)	1360-1½ 537 (600-1½)	
CIRCLING	1360-1¼ 519 (600-1¼)	1460-2 619 (700-2)	1660-3 819 (900-3)		



HIRL all Rwys
REIL Rwys 17 and 30R
TDZ/CL Rwys 12L, 12R, 30L, and 35

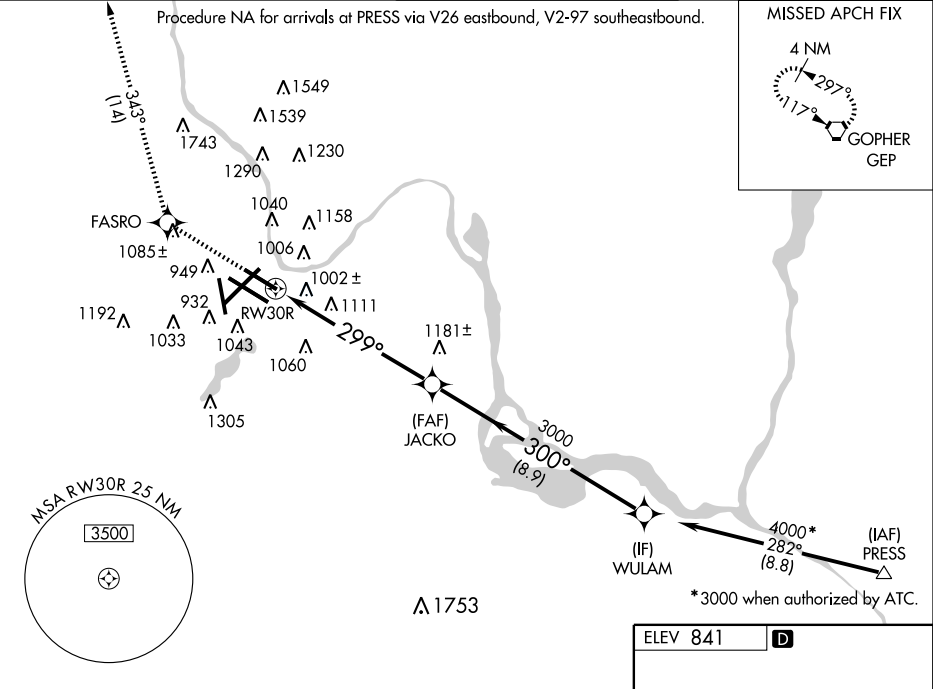
WAAS CH 60925 W30B	APP CRS 299°	Rwy Idg TDZE Apt Elev	8000 823 841
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RNAV (GPS) RWY 30R

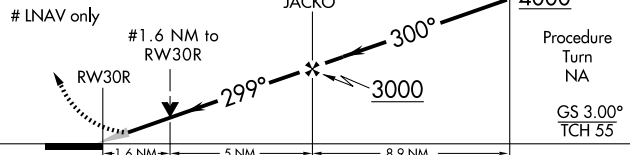
MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

<div><div></div><div></div></div> <div>DME/DME RNP- 0.3 NA. Baro-VNAV NA below -16°C (4°F).</div>	MISSED APPROACH: Climb to 5000 direct FASRO and via 343° track to GEP VORTAC and hold.
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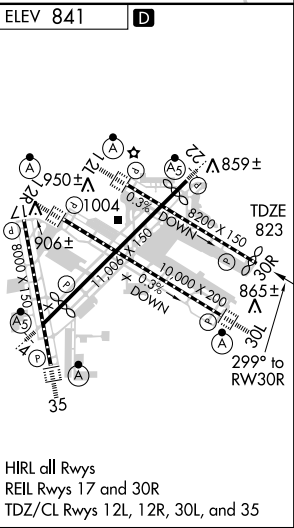
ATIS ARR 135.35 239.275 DEP 120.8	MINNEAPOLIS APP CON 119.3 335.5	MINNEAPOLIS TOWER 123.95 273.55 (12L-30R) 126.7 273.55 (12R-30L, 4-22) 123.675 273.55 (17-35)	GND CON N 121.8 348.6 S 121.9 348.6 W 127.925	CLNC DEL 133.2
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5000 ↑	FASRO ✧	343° track	GEP ◡	* 3000 when authorized by ATC. VGSI and RNAV glidepath not coincident
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CATEGORY	A	B	C	D	E
LPV DA	1073/40 250 (300-¾)				
LNAV/VNAV DA	1294-1¾ 471 (500-1¾)				
LNAV MDA	1400/50 577 (600-1)	1400-1½ 577 (600-1½)	1400-1¾ 577 (600-1¾)	1400-2 577 (600-2)	
CIRCLING	1400-1 559 (600-1)	1400-1½ 559 (600-1½)	1460-2 619 (700-2)	1660-3 819 (900-3)	



WAAS CH 90128 W35A	APP CRS 348°	Rwy Idg 8000 TDZE 834 Apt Elev 841
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RNAV (GPS) Z RWY 35

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

T For inoperative ALSF increase LPV visibility to RVR 4000.
A Baro-VNAV NA below -13°C (8°F).
DME/DME RNP-0.3 NA

ALSF-2

MISSED APPROACH: Climb to 5000 direct CHETZ and via 333° track to GOPHER VORTAC and hold, continue climb-in-hold to 5000.

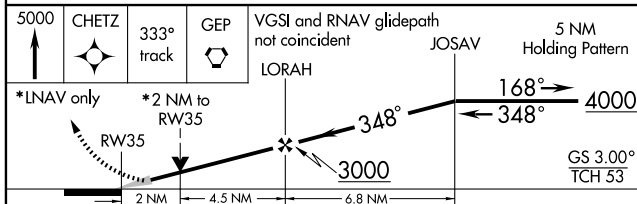
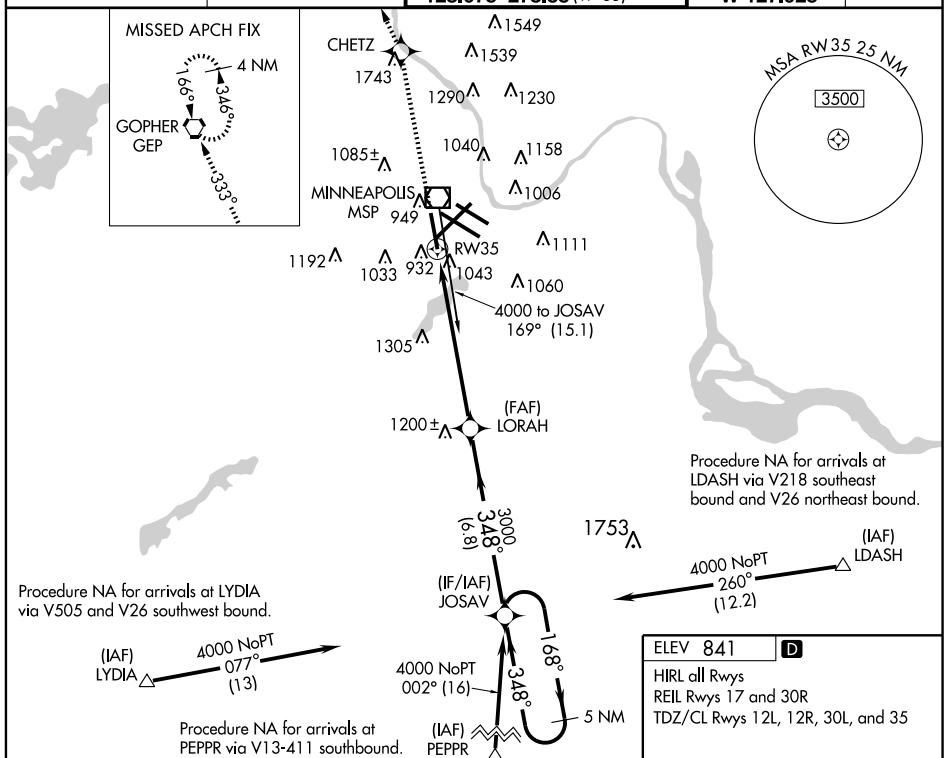
ATIS
ARR **135.35 239.275**
DEP **120.8**

MINNEAPOLIS APP CON
119.3 335.5

MINNEAPOLIS TOWER
123.95 273.55 (12L-30R)
126.7 273.55 (12R-30L, 4-22)
123.675 273.55 (17-35)

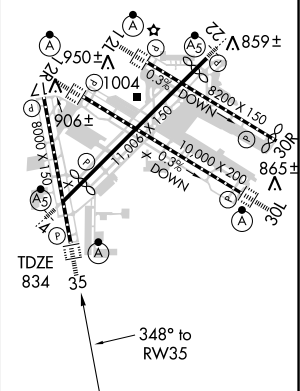
GND CON	
N	121.8 348.6
S	121.9 348.6
W	127.925

CLNC DEL
133.2



CATEGORY	A	B	C	D
LPV DA	1084/24 250 (300-½)			
RNAV/ VNAV DA	1341/60 507 (500-1¼)			
RNAV MDA	1540/24 706 (700-½)	1540-1½ 706 (700-½)	1540-1¾ 706 (700-¾)	
CIRCLING	1540-1 699 (700-1)	1540-2 699 (700-2)	1540-2¼ 699 (700-2¼)	



ELEV 841 **D**
HIRL all Rwy's
REIL Rwy's 17 and 30R
TDZ/CL Rwy's 12L, 12R, 30L, and 35



APP CRS 348°	Rwy Idg TDZE Apt Elev	8000 834 841
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RNAV (RNP) Y RWY 35

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

	Visibility reduction by helicopters NA.
 NA	When VGSI inop, procedure NA at night. GPS required. For uncompensated Baro-VNAV systems, procedure NA below -13°C (8°F) or above 47°C (117°F). For inoperative ALSF, increase RNP 0.19 visibility to 1½ and RNP 0.30 visibility to 1¾.

ALSF-2



MISSED APPROACH: Climb to 5000 via 348° track to CHETZ and via 333° track to GEP VORTAC and hold, continue climb-in-hold to 5000.

ARR **135.35 239.275**
DEP **120.8**

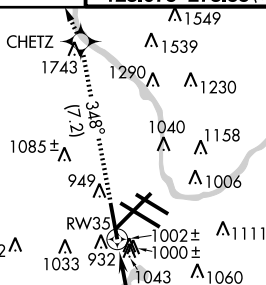
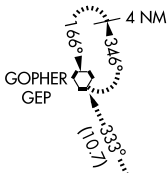
MINNEAPOLIS APP CON
119.3 335.5

MINNEAPOLIS TOWER
123.95 273.55 (12L-30R)
126.7 273.55 (12R-30L, 4-22)
123.675 273.55 (17-35)

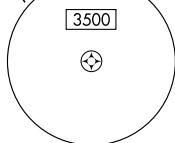
GND CON
N 121.8 348.6
S 121.9 348.6
W 127.925

CLNC DEL
133.2

MISSED APCH FIX



MSA RW35 25 NM





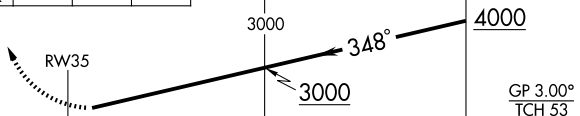
Procedure NA for arrivals at LYDIA via V505 and V26 southwest bound

Procedure NA for arrivals at
LDASH via V218 southeast
bound and V26 northeast bound.

(IAF) LYDIA \triangle $\xrightarrow{4000^\circ 077' (1.2)}$

Procedure NA for arrivals at
PEPPR via V13-411 southbound.

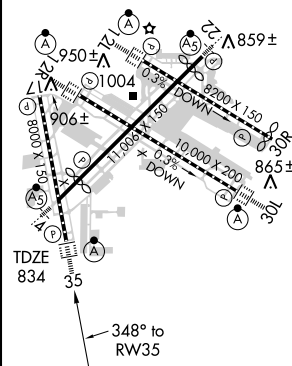
5000 ↑ 348° track	CHETZ 	333° track	GEP 	VGSI and RNAV glidepath not coincident. LORAH L	JOSAV	Procedure Turn NA
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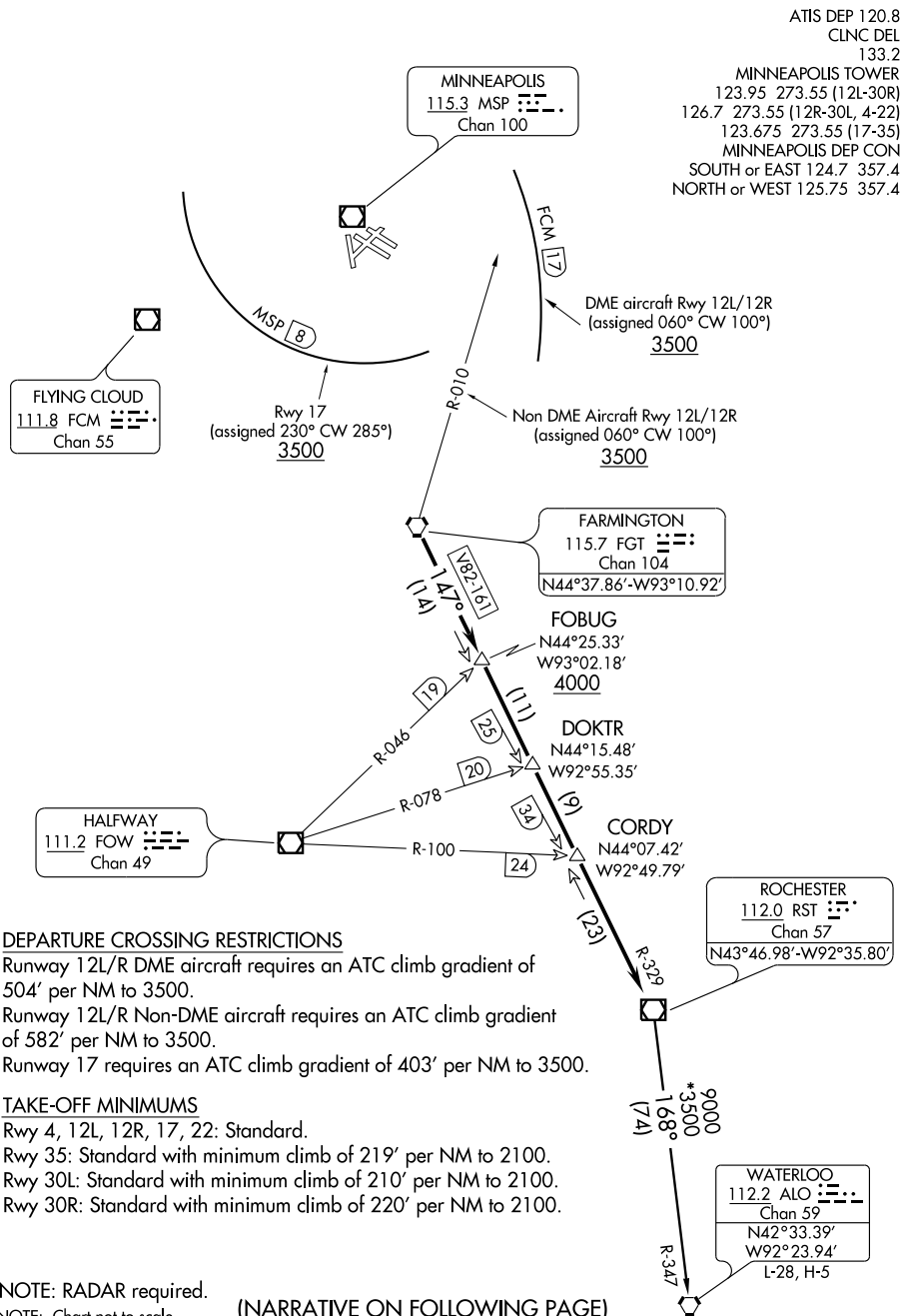
GP 3.00°
TCH 53

CATEGORY	A	B	C
RNP 0.19 DA	1286/50	452 (500-1)	
RNP 0.30 DA	1329/60	495 (500-1½)	

ELEV 841	D
HIRL all Rwys	
REIL Rwy 17 and 30R	
TDZ/CL Rwy 12L, 12R, 30L, and 35	



NC-1. 17 DEC 2009 to 14 JAN 2010





DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Fly assigned heading for radar vectors to FGT VORTAC then via FGT R-147 and RST R-329 to RST VOR/DME. Cross FOBUG INT/FGT 14 DME at or above 4000. Turbojet aircraft maintain 7000 or lower assigned altitude, all other aircraft maintain 5000 or lower assigned altitude.

DME EQUIPPED AIRCRAFT RWY 12L/12R DEPARTURES: Initially assigned heading 060° clockwise to 100°, cross FCM 17 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence. . . .

TAKE-OFF RUNWAY 17: Initially assigned heading 230° clockwise to 285° cross MSP 8 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence. . . .

NON DME EQUIPPED AIRCRAFT RWY 12L/12R DEPARTURES: Initially assigned heading 060° clockwise to 100°: cross FGT R-010 at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence. . . .

TAKE-OFF RUNWAYS 4, 22, 30L/30R, 35: Initially assigned heading. Thence. . . .

. . . .via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

WATERLOO TRANSITION (RST3.ALO): From over RST VOR/DME via RST R-168 and ALO R-347 to ALO VORTAC.

TAKE-OFF OBSTACLE NOTES

RWY 4: Multiple trees beginning 800' from DER, 264' left of centerline, up to 75' AGL/921' MSL.

Rod on building 2528' from DER, 1175' left of centerline, 78' AGL/922' MSL.

Fence 803' from DER, 585' left of centerline, 15' AGL/860' MSL.

Antenna on OL building 456' from DER, 319' left of centerline, 13' AGL/850' MSL.

Light poles 1932' from DER, 718' left of centerline, 45' AGL/885' MSL.

Stack 4535' from DER, 481' left of centerline, 139' AGL/949' MSL.

RWY 22: Tree 2906' from DER, 833' right of centerline, 94' AGL/934' MSL.

Hopper 1716' from DER, 456' left of centerline, 48' AGL/888' MSL.

RWY 17: Antenna 1272' from DER, 562' right of centerline, 57' AGL/891' MSL.

Pole 409' from DER, 530' right of centerline, 29' AGL/866' MSL.

Wind direction indicator on building 2619' from DER, 881' left of centerline, 97' AGL/918' MSL.

Building 2619' from DER, 859' left of centerline, 84' AGL/905' MSL.

Light 1176' from DER, 291' right of centerline, 11' AGL/875' MSL.

Tree 2619' from DER, on centerline, 79' AGL/900' MSL.

RWY 30L: Multiple trees beginning 1113' from DER, 701' left of centerline, up to 80' AGL/919' MSL.

Tree 1230' from DER, 633' right of centerline, 30' AGL/877' MSL.

Ground 28' from DER, 490' right of centerline 0' AGL/844' MSL.

RWY 30R: Building 1056' from DER, 198' left of centerline, 13' AGL/853' MSL.

Multiple trees beginning 3010' from DER, 334' left of centerline, up to 94' AGL/940' MSL.

Light pole 1849' from DER, 698' right of centerline, 17' AGL/871' MSL.

Fence 1327' from DER, 667' right of centerline, 8' AGL/857' MSL.

Tree 3703' from DER, 350' right of centerline, 67' AGL/914' MSL.

Rod on pole 3143' from DER, 47' right of centerline, 38' AGL/898' MSL.

RWY 35: Tree 175' from DER, 398' right of centerline, 73' AGL/883' MSL.

Multiple trees beginning 1989' from DER, 351' left of centerline, up to 65' AGL/902' MSL.

Multiple buildings beginning 5.5 NM from DER, 1787' left of centerline, up to 811' AGL/1743' MSL.

RWY 12R: Multiple trees beginning 1477' from DER, 407' left of centerline, up to 86' AGL/851' MSL.

Multiple trees beginning 1426' from DER, 124' right of centerline, up to 111' AGL/847' MSL.

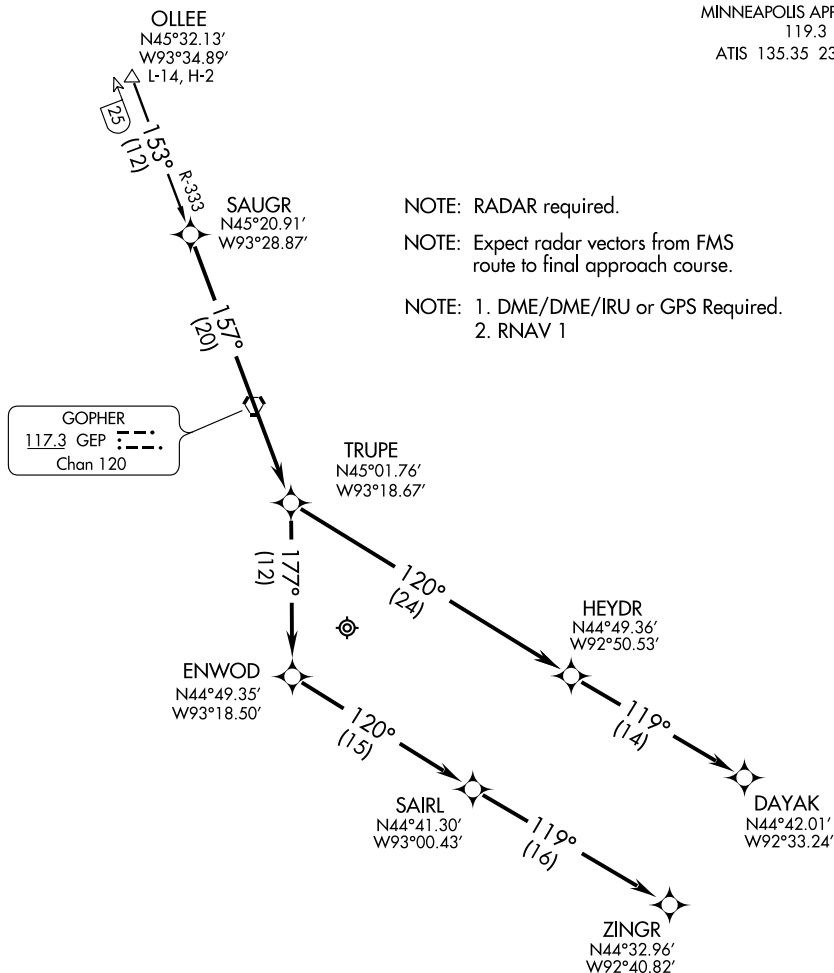
Light pole 1408' from DER, 746' right of centerline, 85' AGL/843' MSL.

Radar reflector 983' from DER, 32' left of centerline, 15' AGL/829' MSL.

Pipe on building, 826' from DER, 576' left of centerline, 10' AGL/825' MSL.

OL on LOC 766' from DER, on centerline, 7' AGL/821' MSL.

SAUGR ONE (FMS) ARRIVAL

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN
ST-264 (FAA) MINNEAPOLIS, MINNESOTAMINNEAPOLIS APP CON
119.3 335.5
ATIS 135.35 239.275

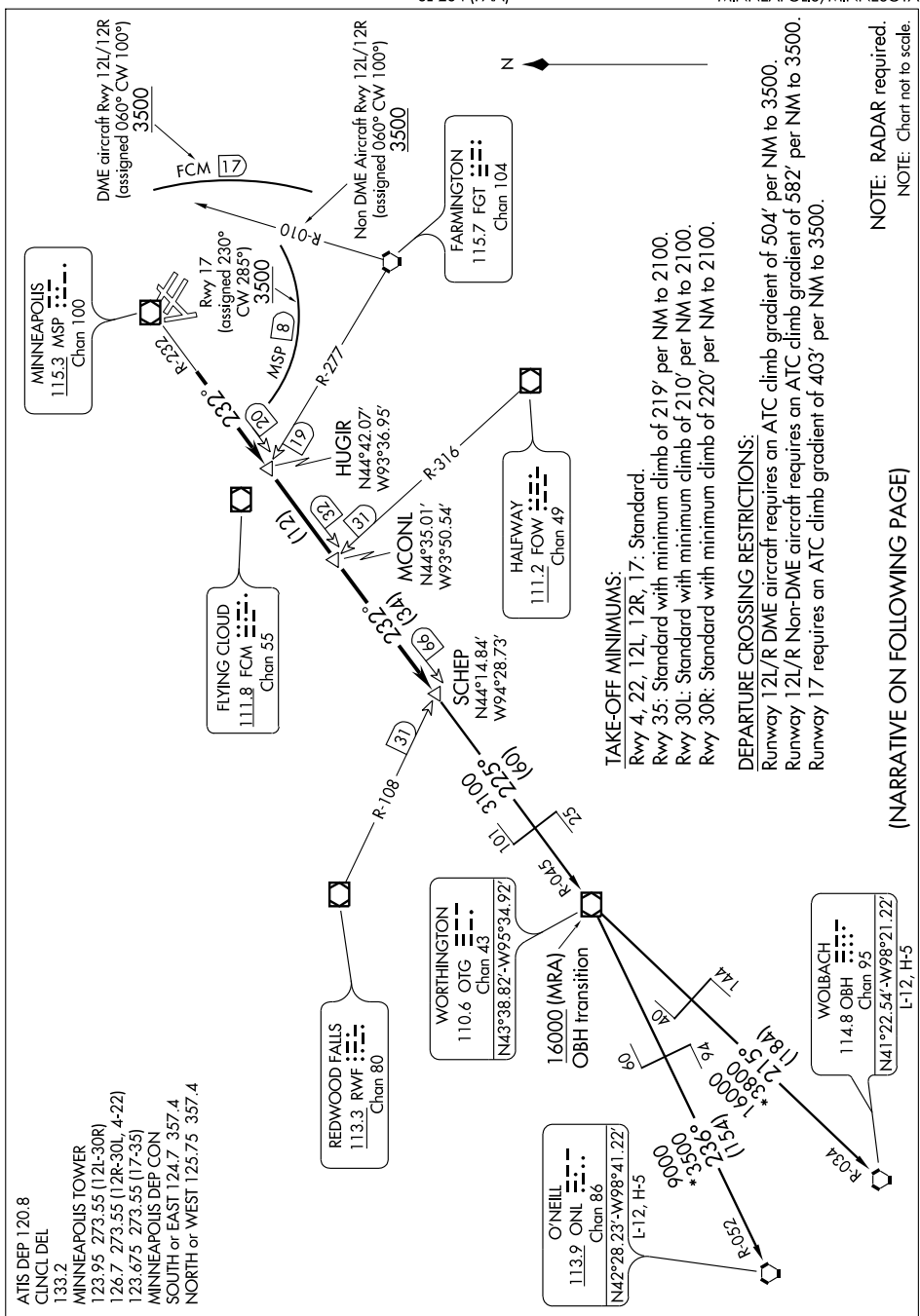
NOTE: Chart not to scale.

Via the GOPHER STAR from over SAUGR WP. Thence . . .

FOR RUNWAY 30L ARRIVALS: To TRUPE WP to ENWOD WP to SAIRL WP to ZINGR WP.FOR RUNWAY 30R ARRIVALS: To TRUPE WP to HEYDR WP to DAYAK WP.

SCHEP TWO DEPARTURE

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)
SL-264 (FAA) MINNEAPOLIS, MINNESOTA



(NARRATIVE ON FOLLOWING PAGE)

NC-1, 17 DEC 2009 to 14 JAN 2010



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Fly assigned heading for radar vectors to MSP R-232 to SCHEP INT/MSP 66 DME. Turbojet aircraft maintain 7000 or lower assigned altitude, all other aircraft maintain 5000 or lower assigned altitude.

DME EQUIPPED AIRCRAFT RWY 12L/12R DEPARTURES: Initially assigned heading 060° clockwise to 100°, cross FCM 17 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence. . . .

TAKE-OFF RUNWAY 17: Initially assigned heading 230° clockwise to 285° cross MSP 8 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence. . . .

NON DME EQUIPPED AIRCRAFT RWY 12L/12R DEPARTURES: Initially assigned heading 060° clockwise to 100°, cross FGT R-010 at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence. . . .

TAKE-OFF RUNWAYS 4, 22, 30L/30R, 35: Initially assigned heading, thence. . . .

. . . . via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

O'NEILL TRANSITION (SCHEP2.ONL): From over SCHEP INT via OTG R-045 to OTG VOR/DME. Then via OTG R-236 and ONL R-052 to ONL VORTAC.

WOLBACH TRANSITION (SCHEP2.OBH): From over SCHEP INT via OTG R-045 to OTG VOR/DME. Then via OTG R-215 and OBH R-034 to OBH VORTAC.

TAKE-OFF OBSTACLE NOTES

RWY 4: Multiple trees beginning 800' from DER, 264' left of centerline, up to 75' AGL/921' MSL.

Rod on building 2528' from DER, 1175' left of centerline, 78' AGL/922' MSL.

Fence 803' from DER, 585' left of centerline, 15' AGL/860' MSL.

Antenna on OL building 456' from DER, 319' left of centerline, 13' AGL/850' MSL.

Light poles 1932' from DER, 718' left of centerline, 45' AGL/885' MSL.

Stack 4535' from DER, 481' left of centerline, 139' AGL/949' MSL.

RWY 22: Tree 2906' from DER, 833' right of centerline, 94' AGL/934' MSL.

Hopper 1716' from DER, 456' left of centerline, 48' AGL/888' MSL.

RWY 30L: Multiple trees beginning 1113' from DER, 701' left of centerline , up to 80' AGL/919' MSL.

Tree 1230' from DER, 633' right of centerline, 30' AGL/877' MSL.

Ground 28' from DER, 490' right of centerline, 0' AGL/844' MSL.

RWY 17: Antenna 1272' from DER, 562' right of centerline, 57' AGL/891' MSL.

Pole 409' from DER, 530' right of centerline, 29' AGL/866' MSL.

Wind direction indicator on building 2619' from DER, 881' left of centerline, 97' AGL/918' MSL.

Building 2619' from DER, 859' left of centerline, 84' AGL/905' MSL.

Light 1176' from DER, 291' right of centerline, 11' AGL/875' MSL.

Tree 2619' from DER, on centerline , 79' AGL/900' MSL.

RWY 30R: Building 1056' from DER, 198' left of centerline, 13' AGL/853' MSL.

Multiple trees beginning 3010' from DER, 334' left of centerline, up to 94' AGL/940' MSL.

Light pole 1849' from DER, 698' right of centerline, 17' AGL/871' MSL.

Fence 1327' from DER, 667' right of centerline, 8' AGL/ 857' MSL.

Tree 3703' from DER, 350' right of centerline, 67' AGL/ 914' MSL.

Rod on pole 3143' from DER, 47' right of centerline, 38' AGL/898' MSL.

RWY 35: Tree 175' from DER, 398' right of centerline, 73' AGL/883' MSL.

Multiple trees beginning 1989' from DER, 351' left of centerline, up to 65' AGL/902' MSL.

Multiple buildings beginning 5.5 NM from DER, 1787' left of centerline, up to 811' AGL/1743' MSL.

RWY 12R: Multiple trees beginning 1477' from DER, 407' left of centerline, up to 86' AGL/851' MSL.

Multiple trees beginning 1426' from DER, 124' right of centerline, up to 111' AGL/847' MSL.

Light pole 1408' from DER, 746' right of centerline, 85' AGL/843' MSL.

Radar reflector 983' from DER, 32' left of centerline, 15' AGL/829' MSL.

Pipe on building 826' from DER, 576' left of centerline, 10' AGL/825' MSL.

OL on LOC 766' from DER, on centerline, 7' AGL/821' MSL.

SKETR THREE ARRIVAL

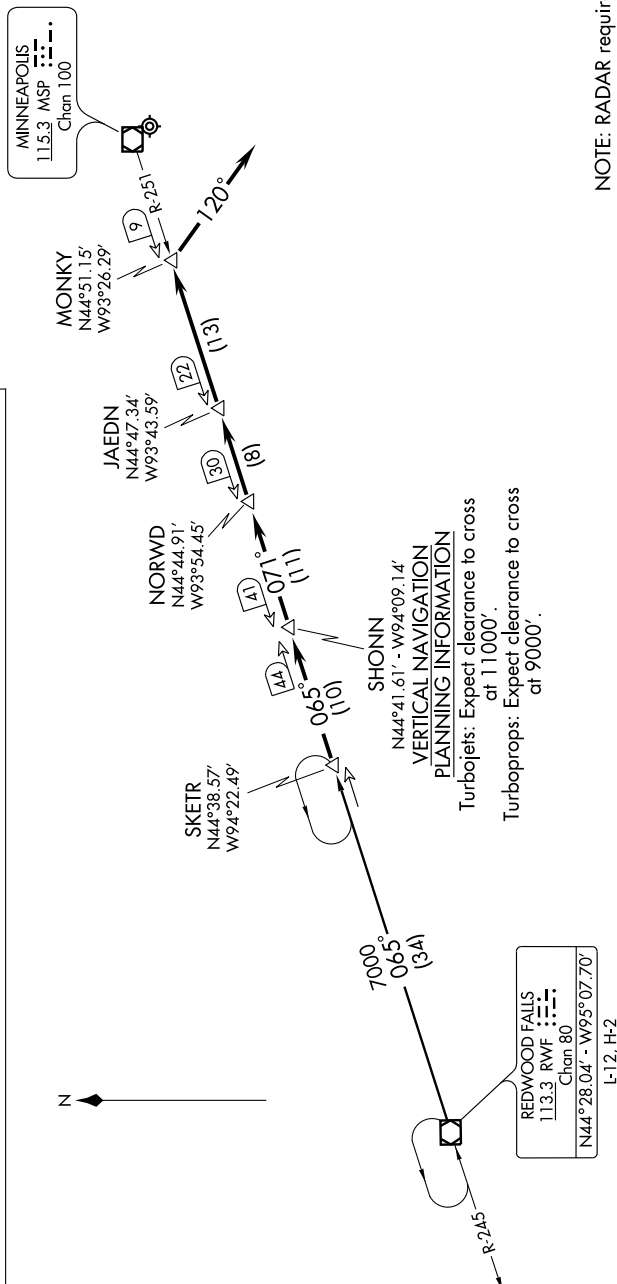
MINNEAPOLIS APP CON
119.3 335.5
ATIS 135.35 239.275

REDWOOD FALLS TRANSITION (RWF.SKETR3): From over RWF VOR/DME via RWF R-065 to SKETR/34 DME. Thence....

.... Via the RWF R-065 to SKETR/34 DME, then to SHONN/44 DME, then via MSP R-251 to NORWD/30 DME, then to JAEDN/22 DME, then to MONKY/9 DME. Thence....

LANDING MSP RUNWAYS 30L/R, 35: Via 120° heading for radar vectors to final approach course.

ALL OTHER RUNWAYS: Via radar vectors to final approach course.



ATIS DEP 120.8
CLNC DEL
133.2
MINNEAPOLIS TOWER
123.95 273.55 (12L-30R)
126.7 273.55 (12R-30L, 4-22)
123.675 273.55 (17-35)
MINNEAPOLIS DEP CON
SOUTH or EAST 124.7 357.4
NORTH or WEST 125.75 357.4

TAKE-OFF MINIMUMS:

Rwy 4, 22, 12L, 12R, 17: Standard.

Rwy 35: Standard with minimum climb of 219' per NM to 2100.

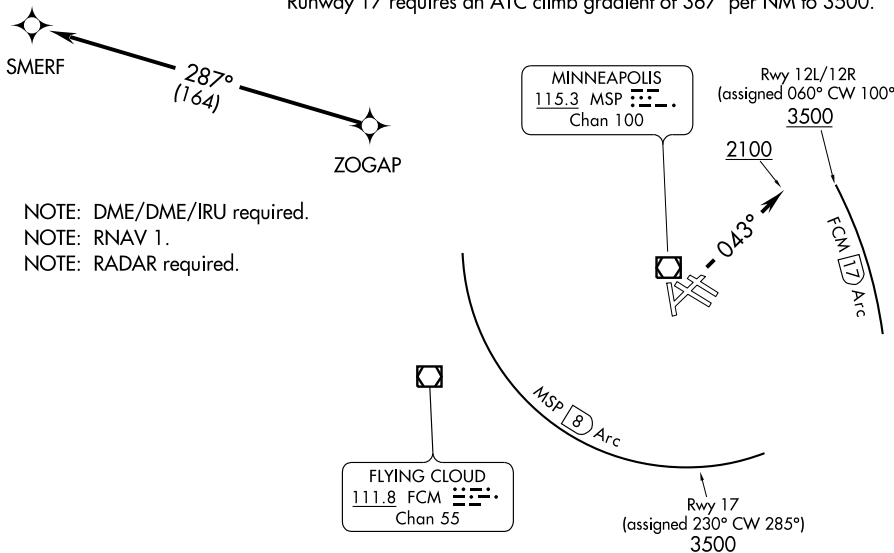
Rwy 30L: Standard with minimum climb of 210 feet per NM to 2100.

Rwy 30R: Standard with minimum climb of 220 feet per NM to 2100.

DEPARTURE CROSSING RESTRICTIONS:

Runway 12L/R requires an ATC climb gradient of 504' per NM to 3500.

Runway 17 requires an ATC climb gradient of 367' per NM to 3500.



NOTE: Chart not to scale.

(NOTES CONTINUED ON FOLLOWING PAGE)

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAY 4: Climb heading 043° to 2100. Thence....

TAKE-OFF RUNWAYS 12L/12R: Initially assigned heading 060° clockwise to 100°, cross FCM VOR/DME 17 DME Arc at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence....

TAKE-OFF RUNWAY 17: Initially assigned heading 230° clockwise to 285°, cross MSP VOR/DME 8 DME Arc at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence....

TAKE-OFF RUNWAYS 22, 35, 30L/R: Climb on assigned heading for radar vectors. Thence...

....expect radar vectors to ZOGAP, then via 287° track to SMERF. Turbojet aircraft maintain 7000 or lower assigned altitude, all other aircraft maintain 5000 or lower assigned altitude. Expect filed altitude/flight level 10 minutes after departure.

SMERF TWO DEPARTURE(RNAV)

SL-264 (FAA)

MINNEAPOLIS, MINNESOTA

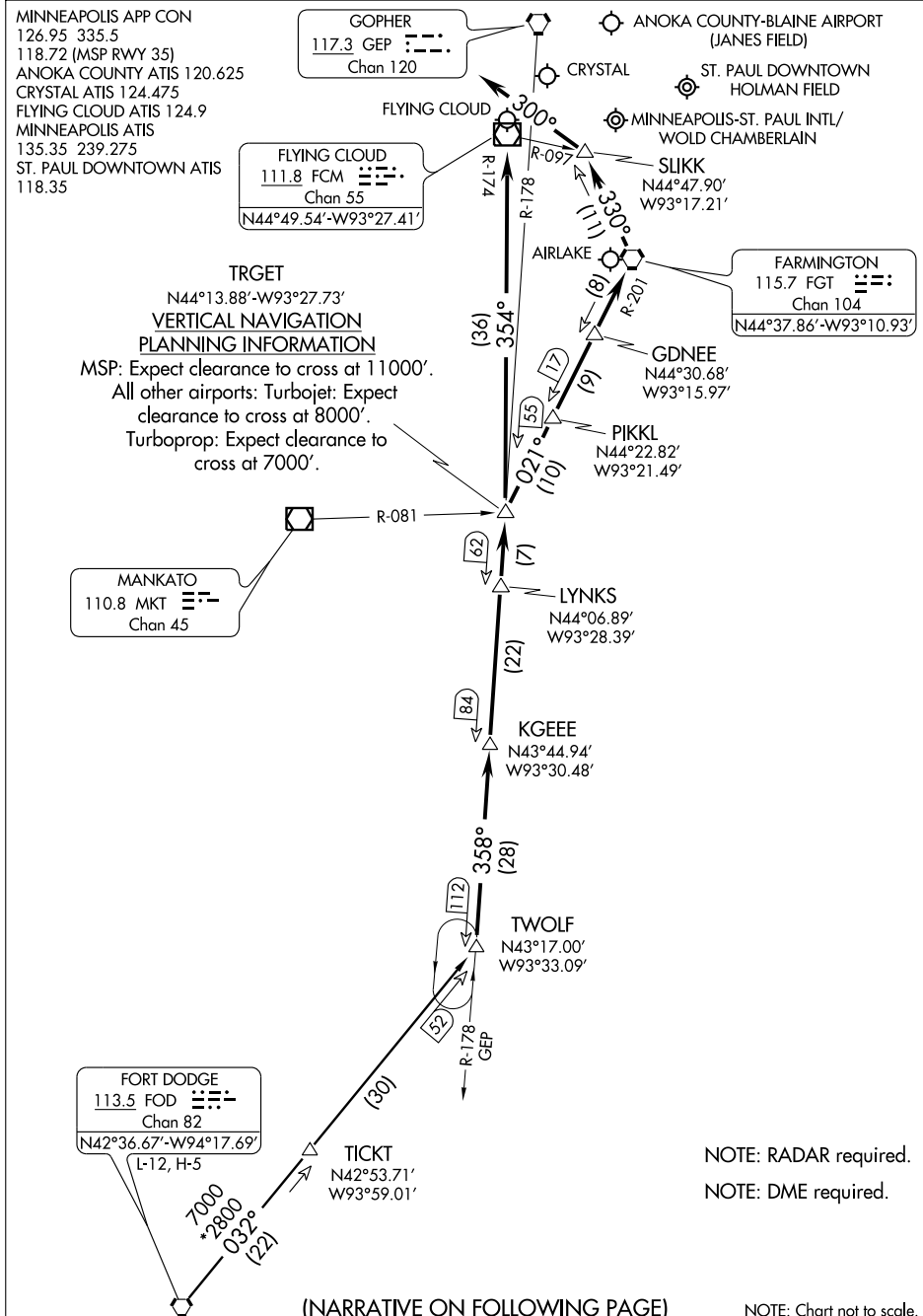
TAKE-OFF OBSTACLE NOTES

- RWY 4: Multiple trees beginning 800' from DER, 264' left of centerline, up to 75' AGL/921' MSL.
Rod on building 2528' from DER, 1175' left of centerline, 78' AGL/922' MSL.
Fence 803' from DER, 585' left of centerline, 15' AGL/860' MSL.
Ant. on OL building 456' from DER, 319' left of centerline, 13' AGL/850' MSL.
LT poles 1932' from DER, 718' left of centerline, 45' AGL/885' MSL.
Stack 4535' from DER, 481' left of centerline, 139' AGL/949' MSL.
- RWY 22: Tree 2906' from DER, 833' right of centerline, 94' AGL/934' MSL.
Hopper 1717' from DER, 456' left of centerline, 48' AGL/888' MSL.
- RWY 30L: Multiple trees beginning 1113' from DER, 701' left of centerline, up to 80' AGL/919' MSL.
Tree 1230' from DER, 633' right of centerline, 30' AGL/877' MSL.
Ground 28' from DER, 490' right of centerline, 0' AGL/844' MSL.
- RWY 17: Antenna 1272' from DER, 562' right of centerline, 57' AGL/891' MSL.
Pole 409' from DER, 530' right of centerline, 29' AGL/866' MSL.
Wind direction indicator on bldg 2619' from DER, 881' left of centerline, 97' AGL/918' MSL.
Bldg 2619' from DER, 859' left of centerline, 84' AGL/905' MSL.
LT 1176' from DER, 291' right of centerline, 11' AGL/875' MSL.
Tree 2619' from DER, on centerline, 79' AGL/900' MSL.
- RWY 30R: Bldg 1056' from DER, 198' left of centerline, 13' AGL/853' MSL.
Multiple trees beginning 3010' from DER, 334' left of centerline, up to 94' AGL/940' MSL.
LT pole 1849' from DER, 698' right of centerline, 17' AGL/871' MSL.
Fence 1327' from DER, 667' right of centerline, 8' AGL/857' MSL.
Tree 3703' from DER, 350' right of centerline, 67' AGL/914' MSL.
Rod on pole 3143' from DER, 47' right of centerline, 38' AGL/898' MSL.
- RWY 35: Tree 175' from DER, 398' right of centerline, 73' AGL/883' MSL.
Multiple trees beginning 1989' from DER, 351' left of centerline, up to 65' AGL/902' MSL.
Multiple buildings beginning 5.45 NM from DER, 1787' left of centerline, up to 811' AGL/1743' MSL.
- RWY 12R: Multiple trees beginning 1477' from DER, 407' left of centerline, up to 86' AGL/851' MSL.
Multiple trees beginning 1426' from DER, 124' right of centerline, up to 111' AGL/847' MSL.
LT pole 1408' from DER, 746' right of centerline, 85' AGL/843' MSL.
Radar reflector 983' from DER, 32' left of centerline, 15' AGL/829' MSL.
Pipe on bldg, 826' from DER, 576' left of centerline, 10' AGL/825' MSL.
OL on LOC 766' from DER, on centerline, 7' AGL/821' MSL.

TWOLF ONE ARRIVAL

ST-264 (FAA)

MINNEAPOLIS, MINNESOTA



ARRIVAL DESCRIPTION

FORT DODGE TRANSITION (FOD.TWOLF1): From over FOD VORTAC via FOD R-032 to TWOLF. Thence....

....From over TWOLF via GEP R-178 to KGEER, then via GEP R-178 to TRGET INT, then via FGT R-201 to FGT VORTAC. Thence....

LANDING MSP RWYS 12L/R: From over FGT VORTAC via FGT R-330 to SLIKK, thence via 300° heading for radar vectors to final approach course.

LANDING MSP RWYS 30L/R, 4, 22, 17, 35: Via radar vectors to final approach course.

ALL OTHER AIRPORTS: From over TRGET INT via FCM VOR/DME R-174 to FCM VOR/DME then expect radar vectors to final approach course.

WAUKON TWO DEPARTURE

SL-264 (FAA)

MINNEAPOLIS, MINNESOTA

TAKE-OFF OBSTACLE NOTES

RWY 4: Multiple trees beginning 800' from DER, 264' left of centerline, up to 75' AGL/921' MSL.

Rod on building 2528' from DER, 1175' left of centerline, 78' AGL/922' MSL.

Fence 803' from DER, 585' left of centerline, 15' AGL/860' MSL.

Antenna on OL building 456' from DER, 319' left of centerline, 13' AGL/850' MSL.

Light poles 1932' from DER, 718' left of centerline, 45' AGL/885' MSL.

Stack 4535' from DER, 481' left of centerline, 139' AGL/949' MSL.

(NOTES CONTINUED ON FOLLOWING PAGE)

ATIS DEP 120.8

CLNC DEL

133.2

MINNEAPOLIS TOWER

123.95 273.55 (12L-30R)

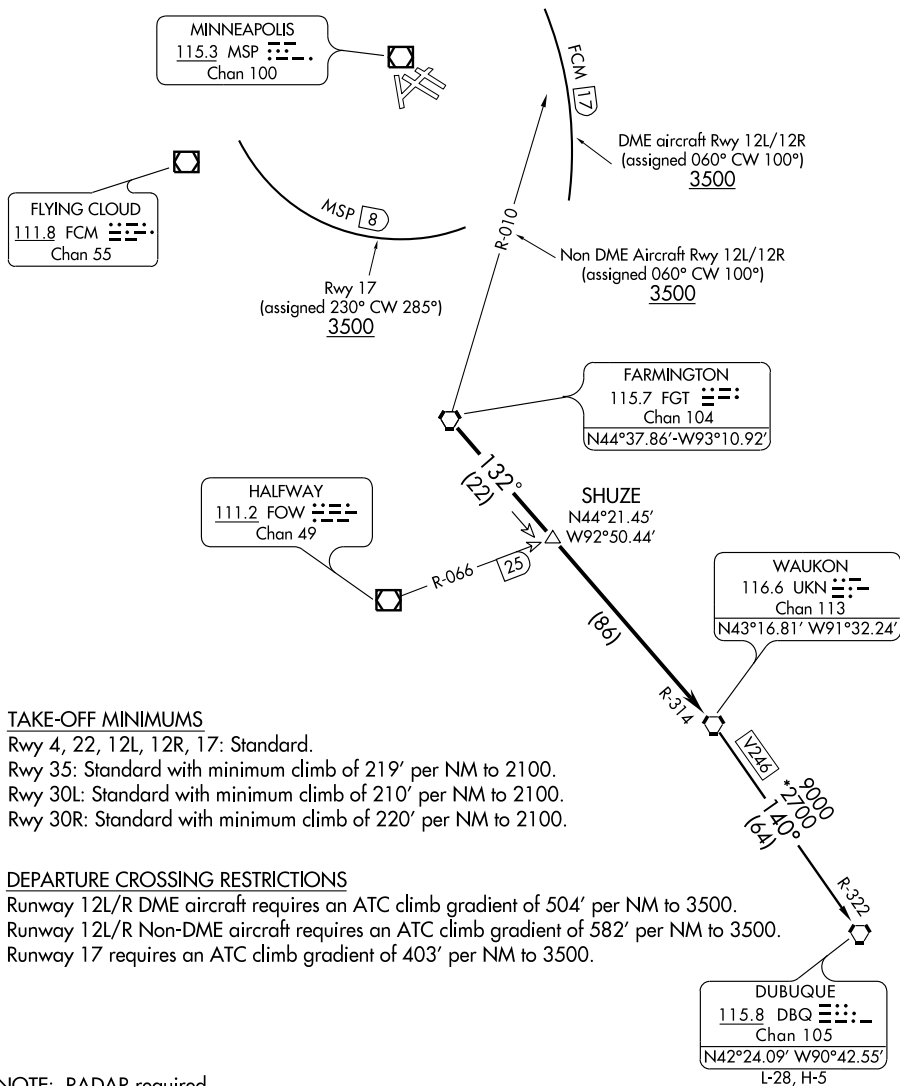
126.7 273.55 (12R-30L, 4-22)

123.675 273.55 (17-35)

MINNEAPOLIS DEP CON

SOUTH or EAST 124.7 357.4

NORTH or WEST 125.75 357.4



TAKE-OFF MINIMUMS

Rwy 4, 22, 12L, 12R, 17: Standard.

Rwy 35: Standard with minimum climb of 219' per NM to 2100.

Rwy 30L: Standard with minimum climb of 210' per NM to 2100.

Rwy 30R: Standard with minimum climb of 220' per NM to 2100.

DEPARTURE CROSSING RESTRICTIONS

Runway 12L/R DME aircraft requires an ATC climb gradient of 504' per NM to 2100.

Runway 12L/R Non-DME aircraft requires an ATC climb gradient of 582' per NM to 2100.

Runway 17 requires an ATC climb gradient of 403' per NM to 2100.

NOTE: RADAR required.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Fly assigned heading for radar vectors to FGT VORTAC then via FGT R-132 and UKN R-314 to UKN VORTAC. Turbojet aircraft maintain 7000 or lower assigned altitude, all other aircraft maintain 5000 or lower assigned altitude.

DME EQUIPPED AIRCRAFT RWY 12L/12R DEPARTURES: Initially assigned heading 060° clockwise to 100°, cross FCM 17 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence. . . .

TAKE-OFF RUNWAY 17: Initially assigned heading 230° clockwise to 285° cross MSP 8 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence. . . .

NON DME EQUIPPED AIRCRAFT RWY 12L/12R DEPARTURES: Initially assigned heading 060° clockwise to 100°: cross FGT R-010 at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence. . . .

TAKE-OFF RUNWAYS 4, 22, 30L/30R, 35: Initially assigned heading. Thence. . . .

. . . .via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

DUBUQUE TRANSITION (UKN2.DBQ): From over UKN VORTAC via UKN R-140 and DBQ R-322 to DBQ VORTAC.

TAKE-OFF OBSTACLE NOTES (cont.)

RWY 22: Tree 2906' from DER, 833' right of centerline, 94' AGL/934' MSL.

Hopper 1716' from DER, 456' left of centerline, 48' AGL/888' MSL.

RWY 17: Antenna 1272' from DER, 562' right of centerline, 57' AGL/891' MSL.

Pole 409' from DER, 530' right of centerline, 29' AGL/866' MSL.

Wind direction indicator on building 2619' from DER, 881' left of centerline, 97' AGL/918' MSL.

Building 2619' from DER, 859' left of centerline, 84' AGL/905' MSL.

Light 1176' from DER, 291' right of centerline, 11' AGL/875' MSL.

Tree 2619' from DER, on centerline, 79' AGL/900' MSL.

RWY 30L: Multiple trees beginning 1113' from DER, 701' left of centerline, up to 80' AGL/919' MSL.

Tree 1230' from DER, 633' right of centerline, 30' AGL/877' MSL.

Ground 28' from DER, 490' right of centerline 0' AGL/844' MSL.

RWY 30R: Building 1056' from DER, 198' left of centerline, 13' AGL/853' MSL.

Multiple trees beginning 3010' from DER, 334' left of centerline, up to 94' AGL/940' MSL.

Light pole 1849' from DER, 698' right of centerline, 17' AGL/871' MSL.

Fence 1327' from DER, 667' right of centerline, 8' AGL/857' MSL.

Tree 3703' from DER, 350' right of centerline, 67' AGL/914' MSL.

Rod on pole 3143' from DER, 47' right of centerline, 38' AGL/898' MSL.

RWY 35: Tree 175' from DER, 398' right of centerline, 73' AGL/883' MSL.

Multiple trees beginning 1989' from DER, 351' left of centerline, up to 65' AGL/902' MSL.

Multiple buildings beginning 5.5 NM from DER, 1787' left of centerline, up to 811' AGL/1743' MSL.

RWY 12R: Multiple trees beginning 1477' from DER, 407' left of centerline, up to 86' AGL/851' MSL.

Multiple trees beginning 1426' from DER, 124' right of centerline, up to 111' AGL/847' MSL.

Light pole 1408' from DER, 746' right of centerline, 85' AGL/843' MSL.

Radar reflector 983' from DER, 32' left of centerline, 15' AGL/829' MSL.

Pipe on building, 826' from DER, 576' left of centerline, 10' AGL/825' MSL.

OL on LOC 766' from DER, on centerline, 7' AGL/821' MSL.

WILDD ONE ARRIVAL

MINNEAPOLIS ST PAUL INTL/WOLD-CHAMBERLAIN
ST-264 (FAA) MINNEAPOLIS, MINNESOTA

MINNEAPOLIS APP CON
119.3 335.5
ATIS 135.35 239 275

NOTE: Arrival Procedure assignable by ATC only - Do Not File.
NOTE: DME and RADAR required.

BITLR

N44°53.04'-W92°19.44'

VERTICAL NAVIGATION

PLANNING INFORMATION

Turbopjet: Expect clearance to
cross at 10000'.

GOPHER
117.3 GEP
Chan 120

MINNEAPOLIS
115.3 MSP
Chan 100

BUKHL
N44°49.08'
W93°22.81'

FLYING CLOUD
111.8 FCM
Chan 55

FARMINGTON
115.7 FGT
Chan 104

NODINE
117.9 ODI
Chan 126

EAU CLAIRE
112.9 EAU
Chan 76

WILDD
N44°25.68'
W90°36.07'

NICKL
N44°45.32'
W91°49.50'

ZMBNI
N44°50.45'
W92°09.30'

PRESS
N44°42.68'
W92°41.23'

ROBBY
N44°04.55'
W89°57.63'

KRSPY
N44°17.79'
W90°21.61'

BEERI
N43°46.15'
W89°24.84'

BADGER
116.4 BAE
Chan 111
N43°07.01' W88°17.06'
L-28, H-5

NOTE: Chart not to scale.

BADGER TRANSITION (BAE WILDD1): From over BAE VORTAC via BAE R-307 to WILDD/BAE 128 DME. Thence....

....From over WILDD/BAE 128 DME via the GEP R-103 to BITLR INT. Thence....

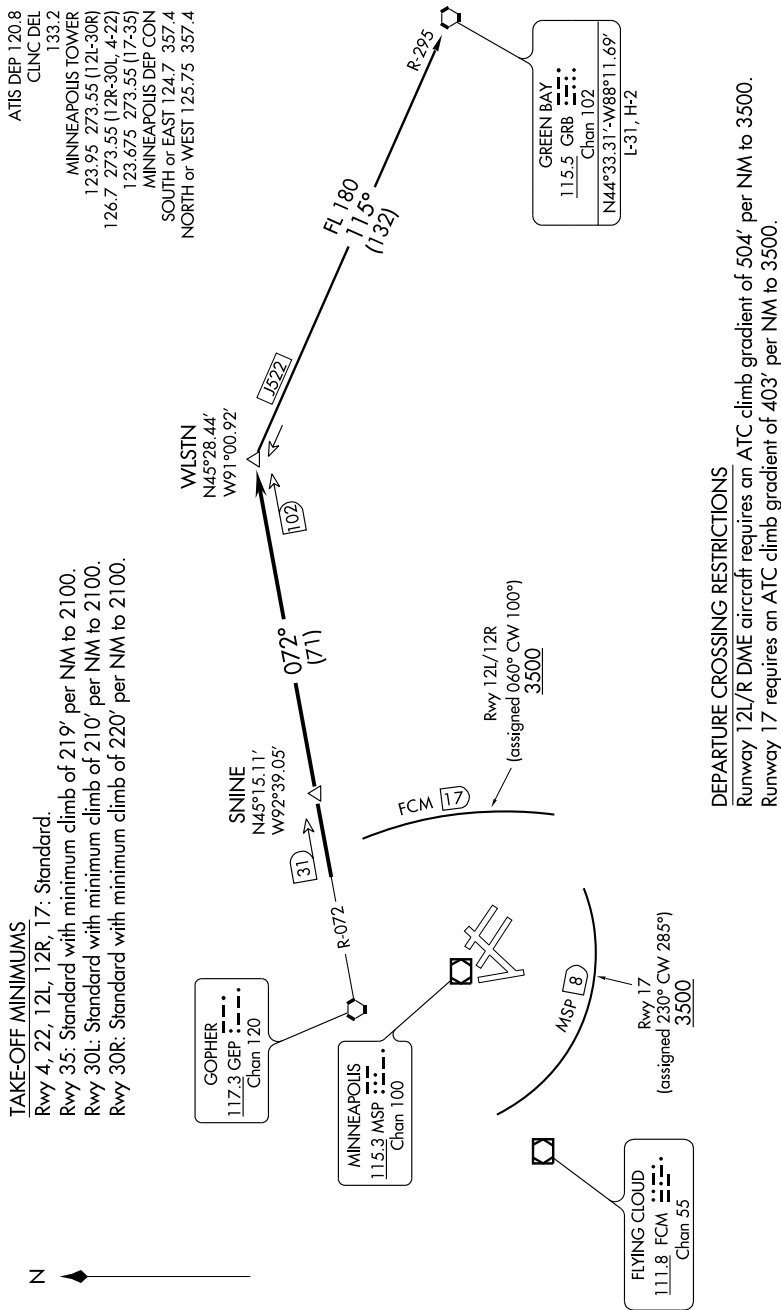
LANDING MSP RWYS 30L/R: PRESS SEGMENT- Via heading 230° to FGT R-071/PRESS INT, then expect radar vectors to final approach course.

LANDING MSP RWYS 12L/R: WEASL SEGMENT- Via heading 249° to FCM R-092/WEASL INT, then via FCM VOR/DME R-092 to BUKHL INT, then via heading 295° for radar vectors to final approach course.

LANDING ALL OTHER MSP RWYS: Expect radar vectors to final approach course.

NC-1, 17 DEC 2009 to 14 JAN 2010

WLSTN TWO DEPARTURE



NOTE: RADAR and DME required.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Fly assigned heading for radar vectors to GEP R-072 to WLSTN/GEP 102 DME. Turbojet aircraft maintain 7000 or lower assigned altitude, all other aircraft maintain 5000 or lower assigned altitude.

TAKE-OFF RUNWAY 12L/12R: Initially assigned heading 060° clockwise to 100°, cross FCM 17 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence. . . .

TAKE-OFF RUNWAY 17: Initially assigned heading 230° clockwise to 285° cross MSP 8 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence. . . .

TAKE-OFF RUNWAYS 4, 22, 30L/30R, 35: Initially assigned heading. Thence. . . .

. . . .via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

GREEN BAY TRANSITION (WLSTN2.GRB): From over WLSTN INT via GRB R-295 to GRB VORTAC.

TAKE-OFF OBSTACLE NOTES

RWY 4: Multiple trees beginning 800' from DER, 264' left of centerline, up to 75' AGL/921' MSL.

Rod on building 2528' from DER, 1175' left of centerline, 78' AGL/922' MSL.

Fence 803' from DER, 585' left of centerline, 15' AGL/860' MSL.

Antenna on OL building 456' from DER, 319' left of centerline, 13' AGL/850' MSL.

Light poles 1932' from DER, 718' left of centerline, 45' AGL/885' MSL.

Stack 4535' from DER, 481' left of centerline, 139' AGL/949' MSL.

RWY 22: Tree 2906' from DER, 833' right of centerline, 94' AGL/934' MSL.

Hopper 1716' from DER, 456' left of centerline, 48' AGL/888' MSL.

RWY 30L: Multiple trees beginning 1113' from DER, 701' left of centerline, up to 80' AGL/919' MSL.

Tree 1230' from DER, 633' right of centerline, 30' AGL/877' MSL.

Ground 28' from DER, 490' right of centerline, 0' AGL/844' MSL.

RWY 17: Antenna 1272' from DER, 562' right of centerline, 57' AGL/891' MSL.

Pole 409' from DER, 530' right of centerline, 29' AGL/866' MSL.

Wind direction indicator on building 2619' from DER, 881' left of centerline, 97' AGL/918' MSL.

Building 2619' from DER, 859' left of centerline, 84' AGL/905' MSL.

Light 1176' from DER, 291' right of centerline, 11' AGL/875' MSL.

Tree 2619' from DER, on centerline, 79' AGL/900' MSL.

RWY 30R: Building 1056' from DER, 198' left of centerline, 13' AGL/853' MSL.

Multiple trees beginning 3010' from DER, 334' left of centerline, up to 94' AGL/940' MSL.

Light pole 1849' from DER, 698' right of centerline, 17' AGL/871' MSL.

Fence 1327' from DER, 667' right of centerline, 8' AGL/ 857' MSL.

Tree 3703' from DER, 350' right of centerline, 67' AGL/ 914' MSL.

Rod on pole 3143' from DER, 47' right of centerline, 38' AGL/898' MSL.

RWY 35: Tree 175' from DER, 398' right of centerline, 73' AGL/883' MSL.

Multiple trees beginning 1989' from DER, 351' left of centerline, up to 65' AGL/902' MSL.

Multiple buildings beginning 5.5 NM from DER, 1787' left of centerline, up to 811' AGL/1743' MSL.

RWY 12R: Multiple trees beginning 1477' from DER, 407' left of centerline, up to 86' AGL/851' MSL.

Multiple trees beginning 1426' from DER, 124' right of centerline, up to 111' AGL/847' MSL.

Light pole 1408' from DER, 746' right of centerline, 85' AGL/843' MSL.

Radar reflector 983' from DER, 32' left of centerline, 15' AGL/829' MSL.

Pipe on building 826' from DER, 576' left of centerline, 10' AGL/825' MSL.

OL on LOC 766' from DER, on centerline, 7' AGL/821' MSL.

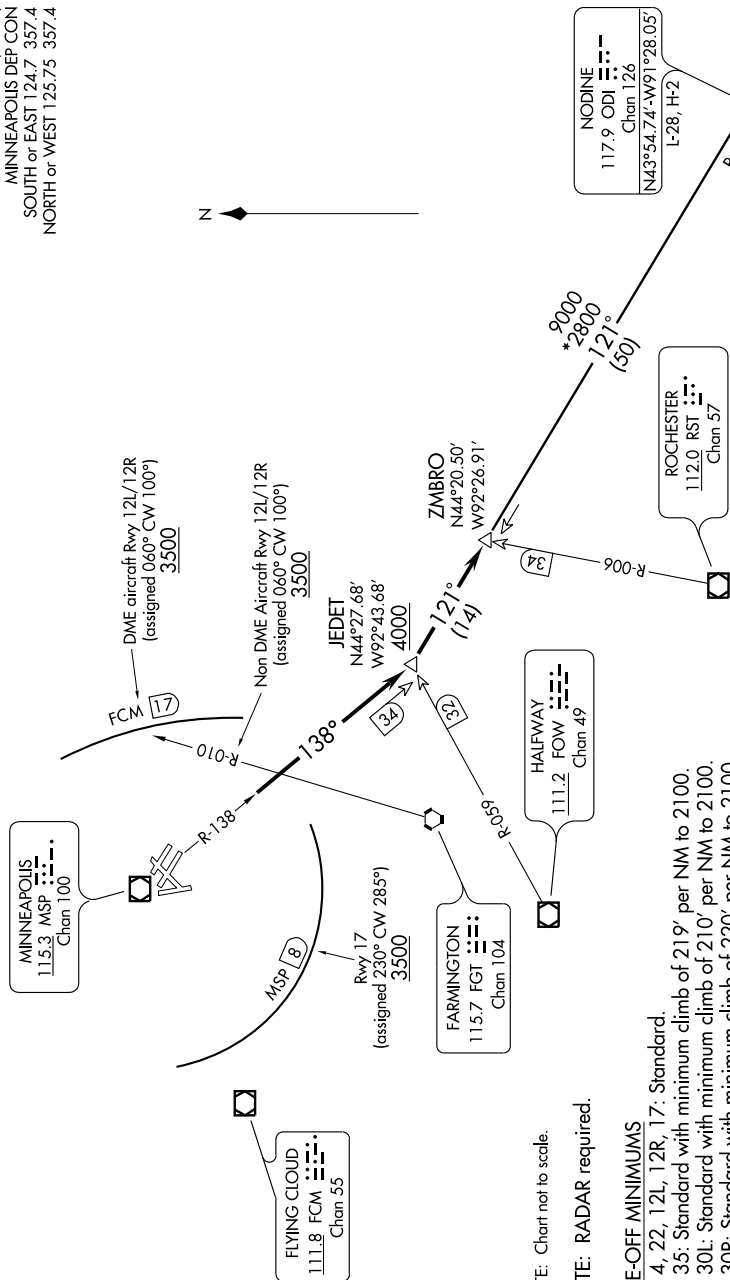
DEPARTURE CROSSING RESTRICTIONS

Runway 12L/R DME aircraft requires an ATC climb gradient of 504' per NM to 3500.

Runway 12L/R Non-DME aircraft requires an ATC climb gradient of 582' per NM to 3500.

Runway 17 requires an ATC climb gradient of 403' per NM to 3500.

ATIS DEP 120.8
CLINC DEL
133.2
MINNEAPOLIS TOWER
123.95 273.55 (12L-30R)
126.7 273.55 (12R-30L, 4-22)
123.675 273.55 (17-35)
MINNEAPOLIS DEP CON
SOUTH or EAST 124.7 357.4
NORTH or WEST 125.75 357.4



NOTE: Chart not to scale.

NOTE: RADAR required.

TAKE-OFF MINIMUMS

Rwy 4, 22, 12L, 12R, 17: Standard.

Rwy 35: Standard with minimum climb of 219' per NM to 2100.

Rwy 30L: Standard with minimum climb of 210' per NM to 2100.

Rwy 30R: Standard with minimum climb of 220' per NM to 2100.

(NARRATIVE ON FOLLOWING PAGE)



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Fly assigned heading for radar vectors to MSP R-138 to JEDET INT/ MSP 34 DME, at or above 4000; then via ODI R-301 to ZMBRO INT/ODI 50 DME. Turbojet aircraft maintain 7000 or lower assigned altitude, all other aircraft maintain 5000 or lower assigned altitude.

DME EQUIPPED AIRCRAFT RWY 12L/12R DEPARTURES: Initially assigned heading 060° clockwise to 100°, cross FCM 17 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence. . . .

TAKE-OFF RUNWAY 17: Initially assigned heading 230° clockwise to 285° cross MSP 8 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence. . . .

NON-DME EQUIPPED AIRCRAFT RWY 12L/12R DEPARTURES: Initially assigned heading 060° clockwise to 100°, cross FGT R-010 at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence. . . .

TAKE-OFF RUNWAYS 4, 22, 30L/30R, 35: Initially assigned heading, thence. . . .

. . . . via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

NODINE TRANSITION (ZMBRO2.ODI): From over ZMBRO INT via ODI R-301 to ODI VORTAC.

TAKE-OFF OBSTACLE NOTES

RWY 4: Multiple trees beginning 800' from DER, 264' left of centerline, up to 75' AGL/921' MSL.

Rod on building 2528' from DER, 1175' left of centerline, 78' AGL/922' MSL.

Fence 803' from DER, 585' left of centerline, 15' AGL/860' MSL.

Antenna on OL building 456' from DER, 319' left of centerline, 13' AGL/850' MSL.

Light poles 1932' from DER, 718' left of centerline, 45' AGL/885' MSL.

Stack 4535' from DER, 481' left of centerline, 139' AGL/949' MSL.

RWY 22: Tree 2906' from DER, 833' right of centerline, 94' AGL/934' MSL.

Hopper 1716' from DER, 456' left of centerline, 48' AGL/888' MSL.

RWY 30L: Multiple trees beginning 1113' from DER, 701' left of centerline, up to 80' AGL/919' MSL.

Tree 1230' from DER, 633' right of centerline, 30' AGL/877' MSL.

Ground 28' from DER, 490' right of centerline, 0' AGL/844' MSL.

RWY 17: Antenna 1272' from DER, 562' right of centerline, 57' AGL/891' MSL.

Pole 409' from DER, 530' right of centerline, 29' AGL/866' MSL.

Wind direction indicator on building 2619' from DER, 881' left of centerline, 97' AGL/918' MSL.

Building 2619' from DER, 859' left of centerline, 84' AGL/905' MSL.

Light 1176' from DER, 291' right of centerline, 11' AGL/875' MSL.

Tree 2619' from DER, on centerline, 79' AGL/900' MSL.

RWY 30R: Building 1056' from DER, 198' left of centerline, 13' AGL/853' MSL.

Multiple trees beginning 3010' from DER, 334' left of centerline, up to 94' AGL/940' MSL.

Light pole 1849' from DER, 698' right of centerline, 17' AGL/871' MSL.

Fence 1327' from DER, 667' right of centerline, 8' AGL/ 857' MSL.

Tree 3703' from DER, 350' right of centerline, 67' AGL/ 914' MSL.

Rod on pole 3143' from DER, 47' right of centerline, 38' AGL/898' MSL.

RWY 35: Tree 175' from DER, 398' right of centerline, 73' AGL/883' MSL.

Multiple trees beginning 1989' from DER, 351' left of centerline, up to 65' AGL/902' MSL.

Multiple buildings beginning 5.5 NM from DER, 1787' left of centerline, up to 811' AGL/1743' MSL.

RWY 12R: Multiple trees beginning 1477' from DER, 407' left of centerline, up to 86' AGL/851' MSL.

Multiple trees beginning 1426' from DER, 124' right of centerline, up to 111' AGL/847' MSL.

Light pole 1408' from DER, 746' right of centerline, 85' AGL/843' MSL.

Radar reflector 983' from DER, 32' left of centerline, 15' AGL/829' MSL.

Pipe on building 826' from DER, 576' left of centerline, 10' AGL/825' AGL.

OL on LOC 766' from DER, on centerline, 7' AGL/821' MSL.

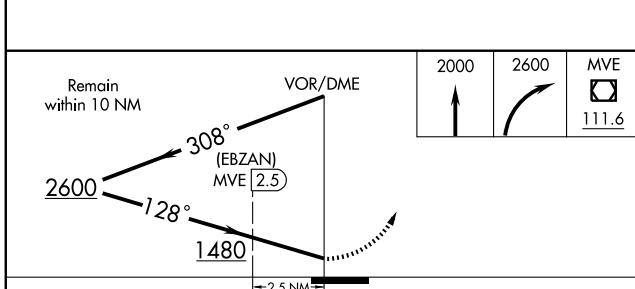
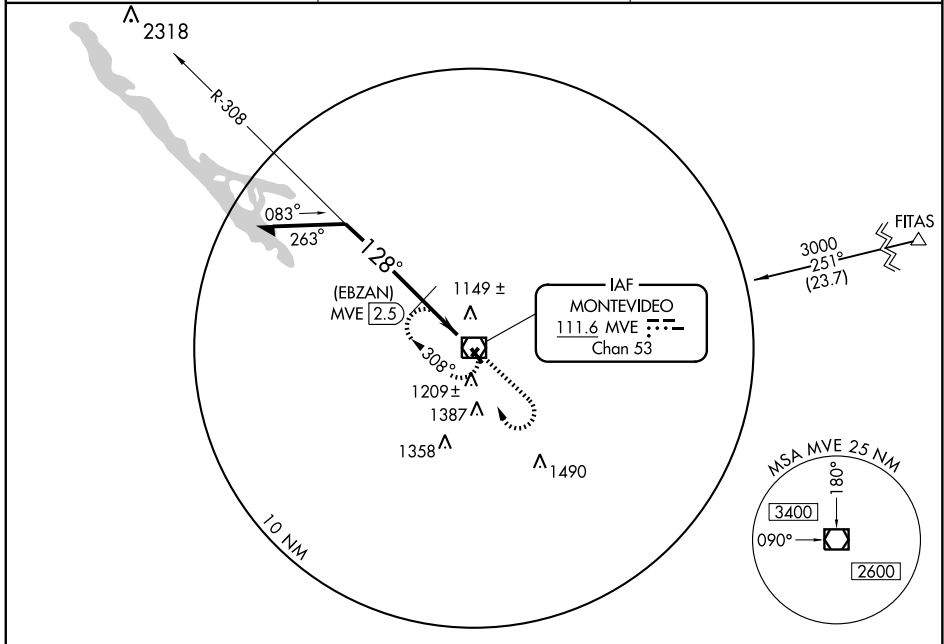
VOR/DME MVE 111.6 Chan 53	APP CRS 128°	Rwy Idg TDZE Apt Elev 4000 1034 1034
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VOR or GPS RWY 14

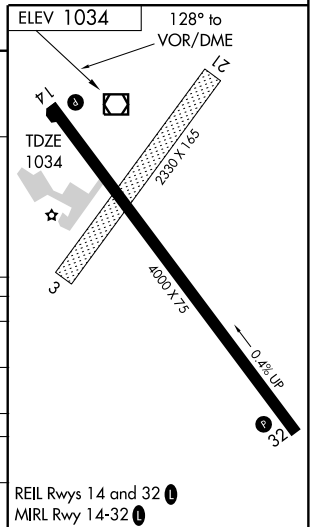
MONTEVIDEO-CHIPPEWA COUNTY (MVE)

<p>NA</p>	<p>MISSED APPROACH: Climb to 2000 then climbing right turn to 2600 direct MVE VOR/DME and hold.</p>
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<p>AWOS-3 111.6</p>	<p>MINNEAPOLIS CENTER 125.5 323.1</p>	<p>UNICOM 122.8 (CTAF)</p>
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CATEGORY	A	B	C	D
S-14	1480-1	446 (500-1)	1480-1¼ 446 (500-1¼)	1480-1½ 446 (500-1½)
CIRCLING	1520-1	486 (500-1)	1520-1½ 486 (500-1½)	1700-2 666 (700-2)
DME MINIMUMS				
S-14	1400-1	366 (400-1)	1400-1¼ 366 (400-1¼)	1400-1½ 366 (400-1½)
CIRCLING	1520-1	486 (500-1)	1520-1½ 486 (500-1½)	1700-2 666 (700-2)



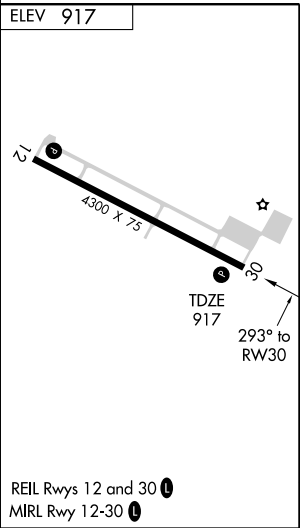
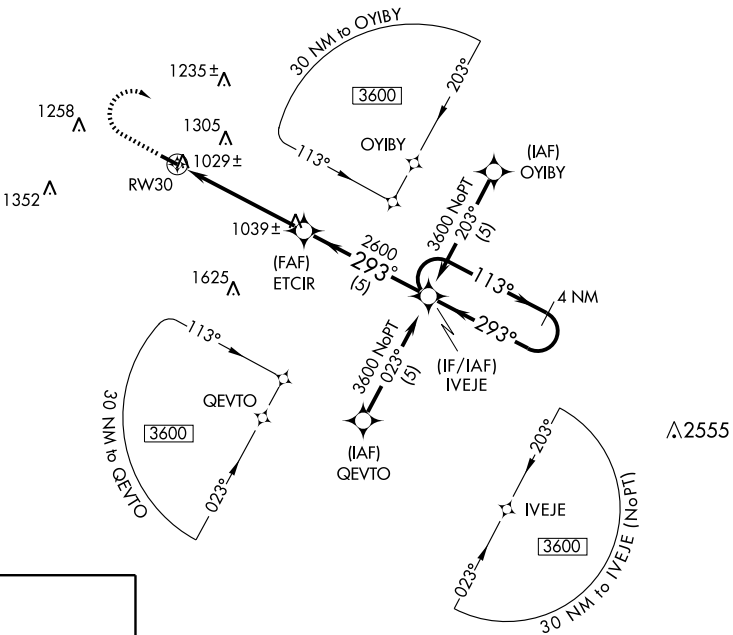
APP CRS 293°	Rwy Idg TDZE Apt Elev	4000 917 917
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RNAV (GPS) RWY 30

MOORHEAD MUNI (JKJ)

NA GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.	MISSED APPROACH: Climb to 1700 then climbing right turn to 3600 direct IVEJE WP and hold.
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AWOS-3 120.0	FARGO APP CON ★ 120.4 377.15	UNICOM 123.0 (CTAF) 0
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	1700	3600	IVEJE	
			ETCIR	IVEJE
			2600	4 NM Holding Pattern
			293°	113°
			293°	3600
			5.1 NM	5 NM
CATEGORY	A	B	C	D
LNAV MDA	1280-1	363 (400-1)	NA	
CIRCLING	1340-1 423 (500-1)	1380-1 463 (500-1)	NA	

VORTAC FAR 116.2 Chan 109	APP CRS 048°	Rwy Idg TDZE Apt Elev	N/A N/A 917
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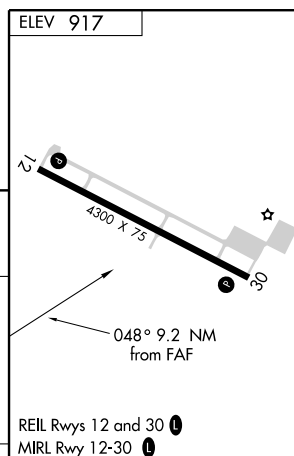
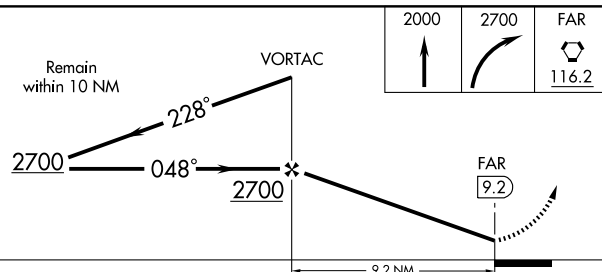
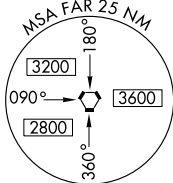
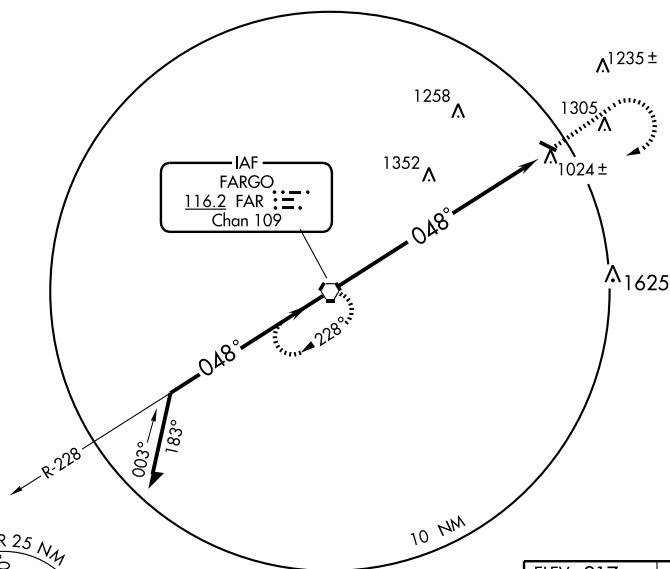
VOR-A
MOORHEAD MUNI (JKJ)

MISSED APPROACH: Climb to 2000, then climbing right turn to 2700 direct FAR VORTAC and hold.

AWOS-3
120.0

FARGO APP CON ★
120.4 377.15

UNICOM
123.0 (CTAF) **L**



CATEGORY	A	B	C	D	FAF to MAP 9.2 NM					
CIRCLING	1580-1	663 (700-1)	NA		Knots	60	90	120	150	180
					Min:Sec	9:12	6:08	4:36	3:41	3:04

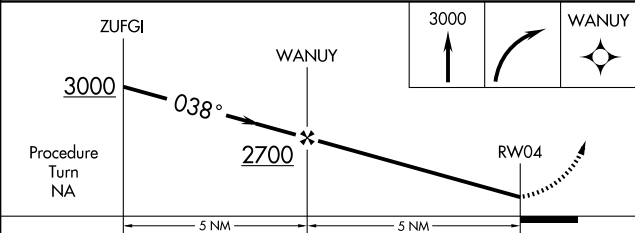
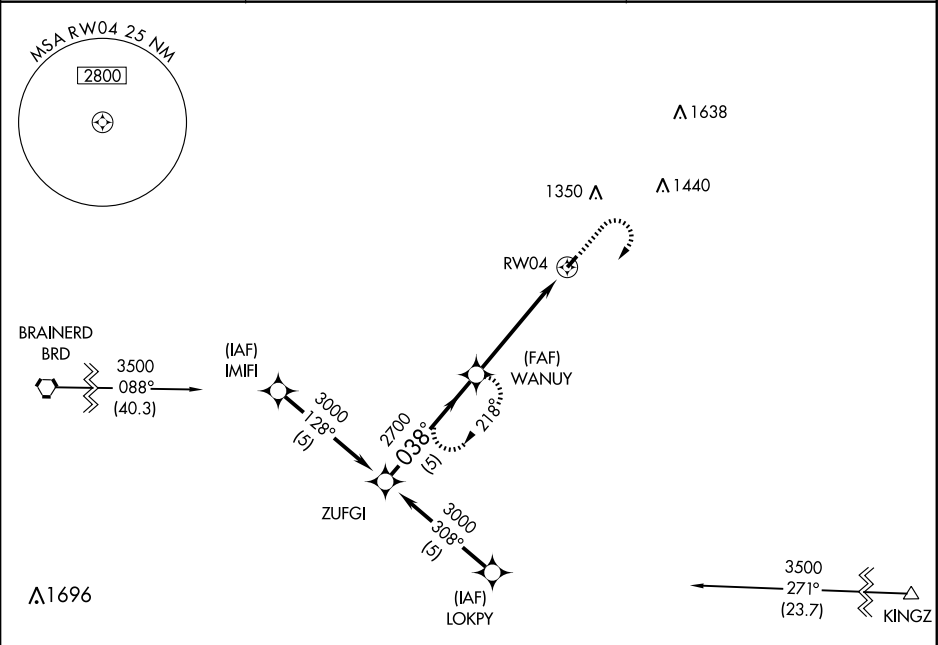
GPS RWY 4

MOOSE LAKE CARLTON COUNTY (MZH)

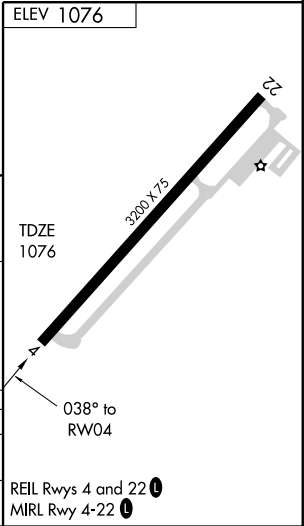
APP CRS	Rwy Idg	3200
038°	TDZE	1076
	Apt Elev	1076

  NA	MISSED APPROACH: Climb to 3000 then right turn direct WANUY WP and hold.
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AWOS-3 362	DULUTH APP CON ★ 125.45 255.9	CTAF 122.9 
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CATEGORY	A	B	C	D
S-4	1540-1	464 (500-1)	NA	
CIRCLING	1660-1	584 (600-1)	NA	



NDB RWY 4

MOOSE LAKE CARLTON COUNTY (MZH)

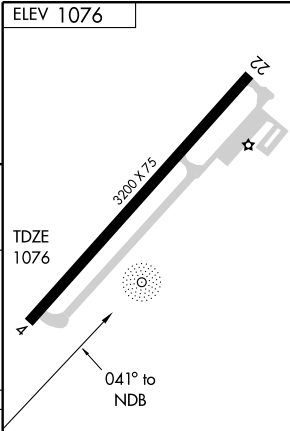
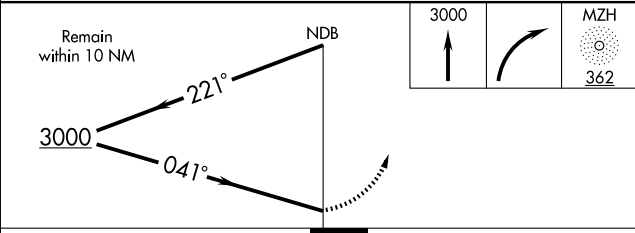
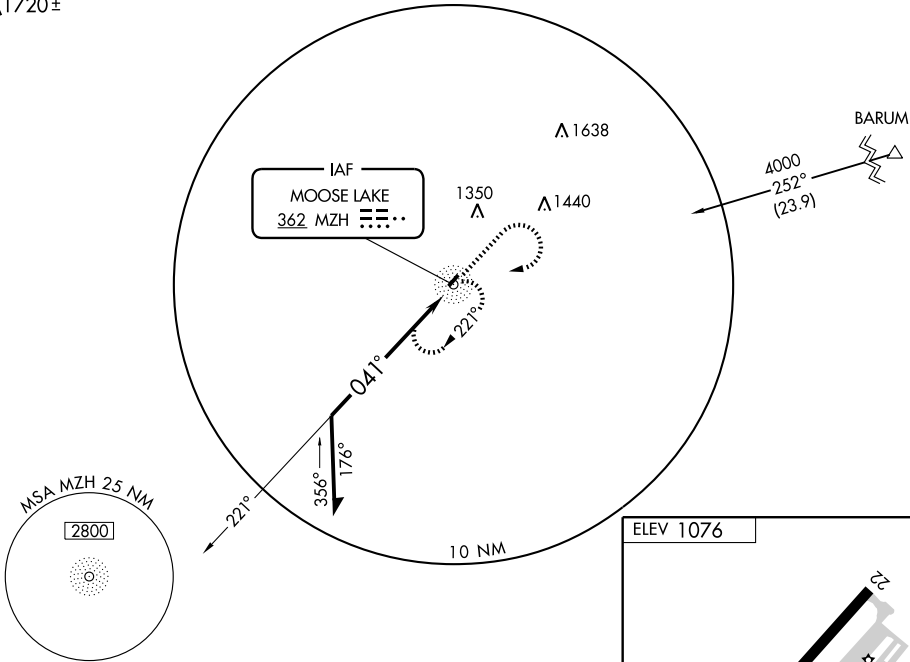
NDB MZH	APP CRS	Rwy Idg	3200
362	041°	TDZE	1076
		Apt Elev	1076


 NA

MISSED APPROACH: Climb to 3000, then right turn direct MZH NDB and hold.

AWOS-3 362	DULUTH APP CON ★ 125.45 255.9	CTAF 122.9
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Λ1720±



CATEGORY	A	B	C	D
S-4	1800-1	724 (800-1)	NA	
CIRCLING	1800-1	724 (800-1)	NA	

REIL Rwy 4 and 22
MRL Rwy 4-22

NDB JMR <u>327</u>	APP CRS 355°	Rwy Idg TDZE Apt Elev	3998 1008 1012
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NDB or GPS RWY 35

MORA MUNI (JMR)

ANA

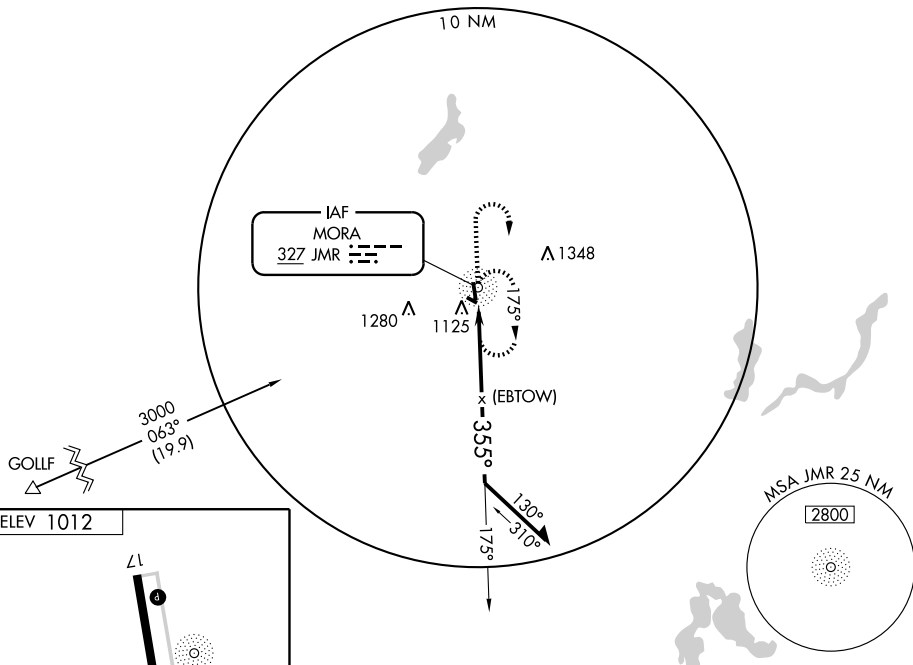
MISSED APPROACH: Climb to 2800 then right turn direct JMR NDB and hold.

AWOS-3
327

MINNEAPOLIS CENTER
121.05 397.9

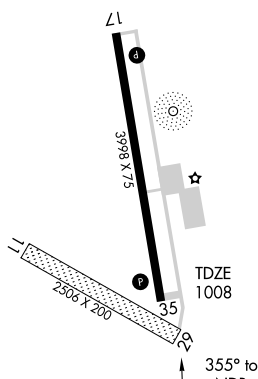
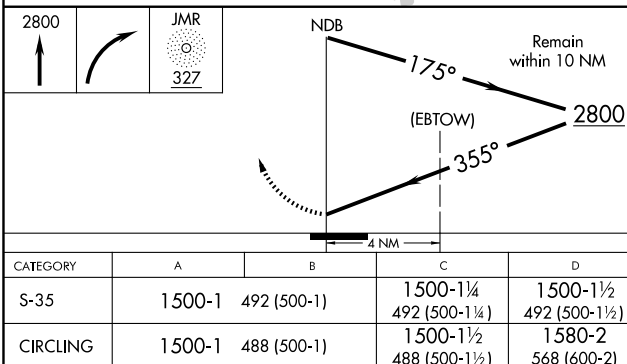
CTAF
122.8

Λ
1636



NC-1. 17 DEC 2009 to 14 JAN 2010

ELEV 1012

REIL Rwy 17 and 35 **L**MIRL Rwy 17-35 **L**

APP CRS	Rwy Idg	4000
139°	TDZE	1132
	Apt Elev	1138

RNAV (GPS) RWY 14

MORRIS MUNI-CHARLIE SCHMIDT FIELD (MOX)

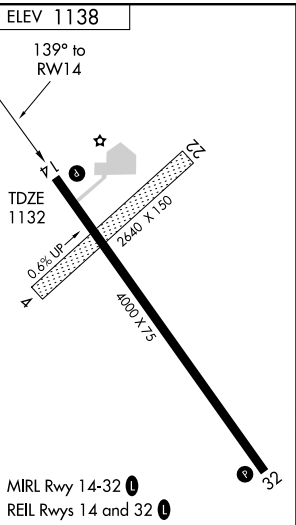
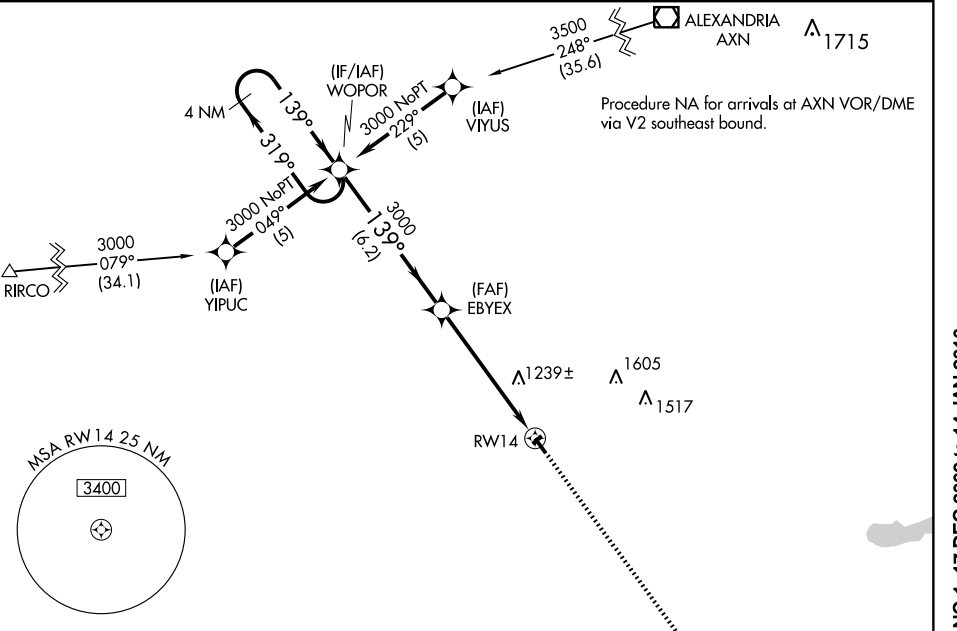
▼

▲

DME/DME RNP-0.3 NA.
When local altimeter setting not received, use Benson
altimeter setting and increase all MDA 60 feet.
VDP NA when using Benson altimeter setting.

MISSED APPROACH: Climb to 3500 direct URTAW and hold.

AWOS-3 109.6	MINNEAPOLIS CENTER 126.1 269.2	UNICOM 122.8 (CTAF) 0
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4 NM Holding Pattern	WOPOR		EBYEX		3500	URTAW
	3000 ← 319° → 139°		3000		1.2 NM to RW14	RW14
		3.05° TCH 44				
		6.2 NM		4.4 NM	1.2 NM	
CATEGORY	A	B	C	D		
LNAV MDA	1560-1	428 (500-1)	1560-1¼ 428 (500-1¼)	NA		
CIRCLING	1560-1 422 (500-1)	1600-1 462 (500-1)	1600-1½ 462 (500-1½)	NA		

NC-1. 17 DEC 2009 to 14 JAN 2010

APP CRS	Rwy Idg	4000
319°	TDZE	1132
	Apt Elev	1138

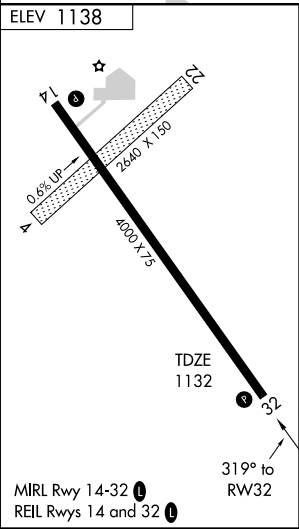
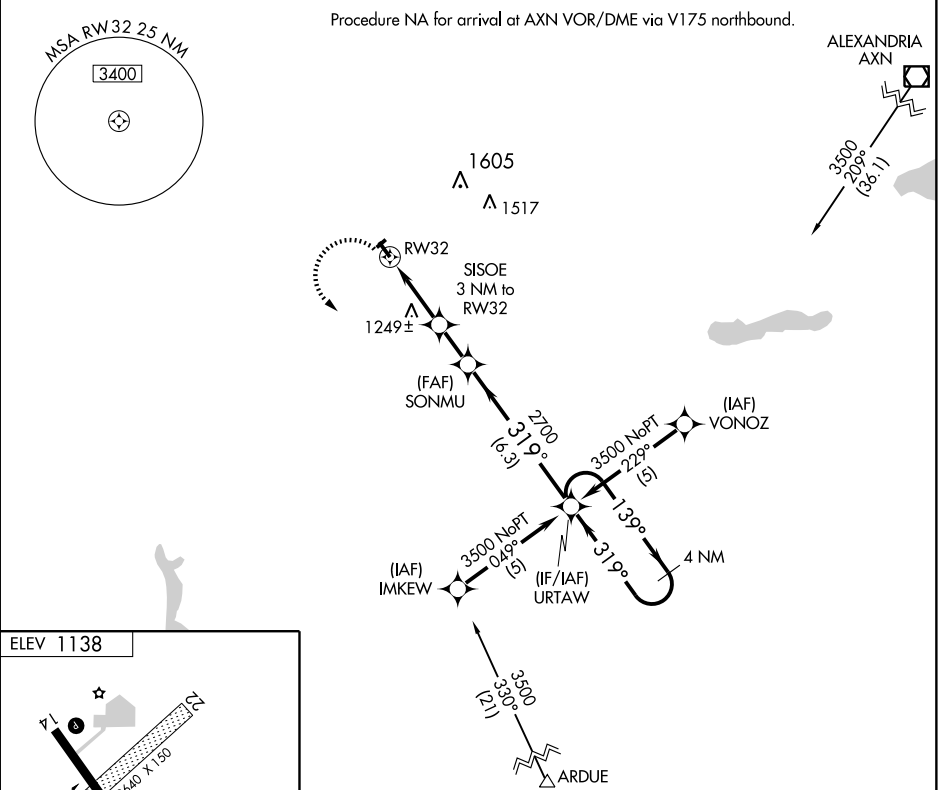
RNAV (GPS) RWY 32

MORRIS MUNI-CHARLIE SCHMIDT FIELD (MOX)

⚠ DME/DME RNP-0.3 NA.
⚠ VDP NA when using Benson altimeter setting.
When local altimeter setting not received, use Benson altimeter setting and increase all MDAs 60 feet.

MISSED APPROACH: Climbing left turn to 3500 direct URTAW and hold.

AWOS-3 109.6	MINNEAPOLIS CENTER 126.1 269.2	UNICOM 122.8 (CTAF) 0
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	3500	URTAW					
			SISOE 3 NM to RW32	SONMU	URTAW	4 NM Holding Pattern	
			1.2 NM to RW32	3.04° TCH 48	2700	139°	3500
			2140	319°	319°		
			1.2 NM	1.8 NM	1.7 NM	6.3 NM	
CATEGORY	A	B	C	D			
LNAV MDA	1540-1	408 (500-1)	1540-1¼ 408 (500-1¼)	NA			
CIRCLING	1560-1 422 (500-1)	1600-1 462 (500-1)	1600-1½ 462 (500-1½)	NA			

VOR/DME MOX	APP CRS	Rwy Idg	4000
109.6	144°	TDZE	1132
Chan 33		Apt Elev	1138

▼

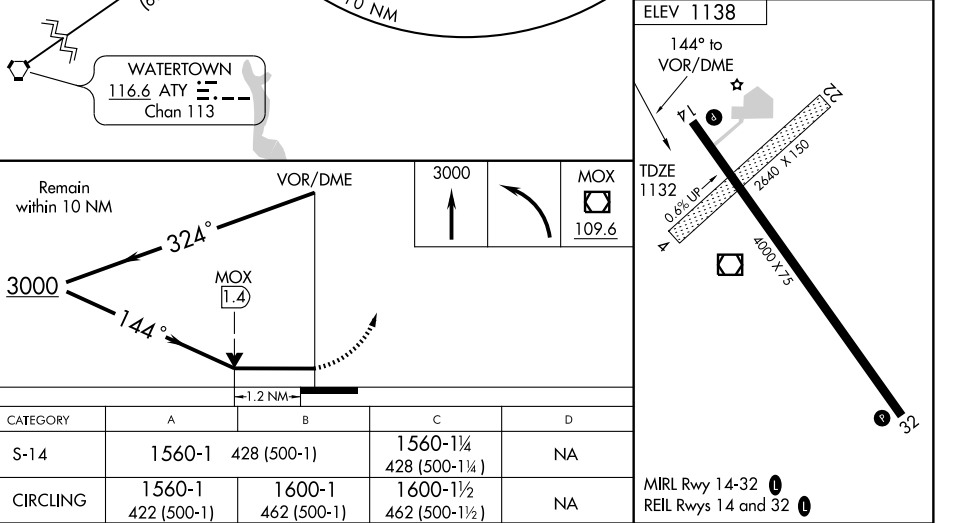
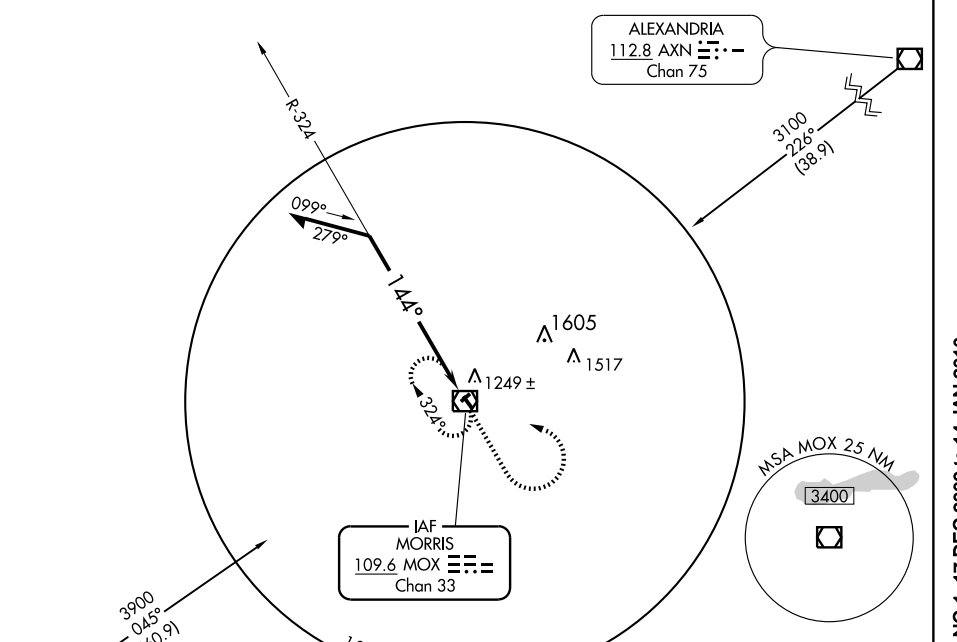
▲ NA

When local altimeter setting not received, use Benson altimeter setting and increase all MDA 60 feet.

VDP NA when using Benson altimeter setting.

MISSED APPROACH: Climb to 3000 then left turn direct MOX VOR/DME and hold.

AWOS-3 109.6	MINNEAPOLIS CENTER 126.1 269.2	UNICOM 122.8 (CTAF) 0
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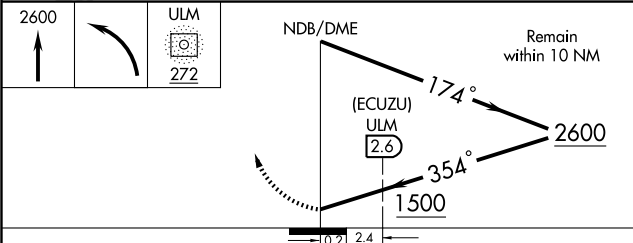
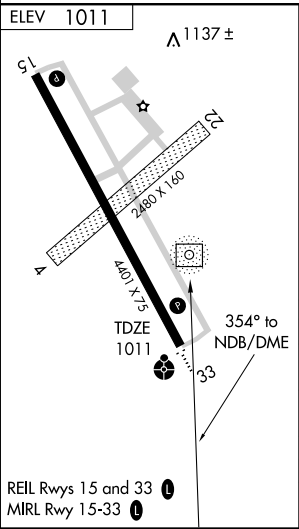
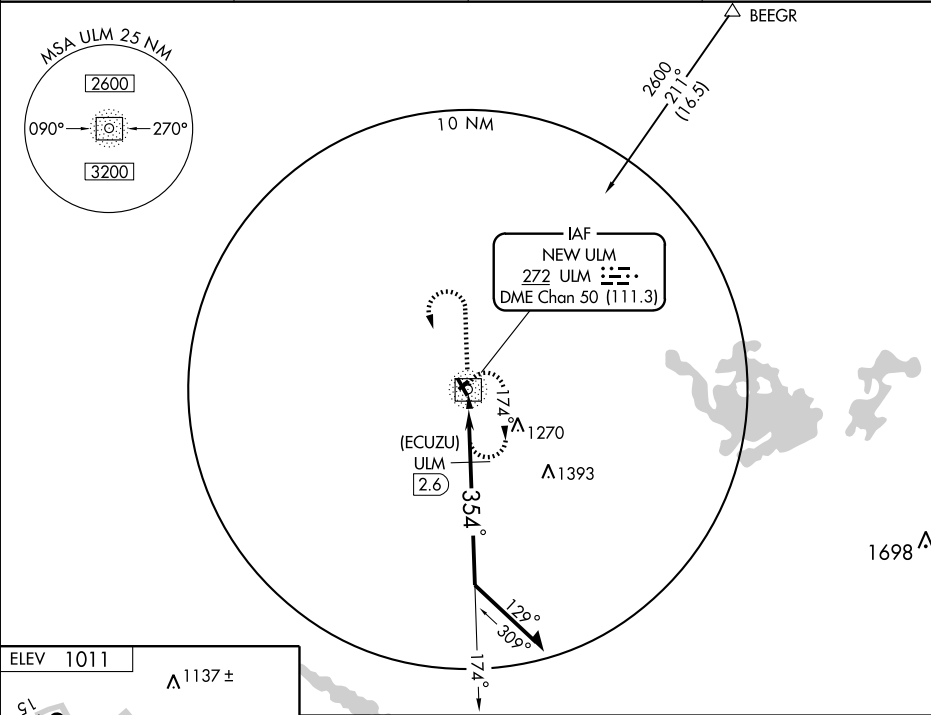


NDB/DME ULM	APP CRS	Rwy Idg	4401
272	354°	TDZE	1011
Chan 50 (111.3)		Apt Elev	1011

NDB or GPS RWY 33
NEW ULM MUNI (ULM)

Inoperative table does not apply to S-33 Cats C and D.	ODALS 	MISSED APPROACH: Climb to 2600 then left turn direct ULM NDB/DME and hold.
NA		

AWOS-3 118.325	MINNEAPOLIS CENTER 127.1 290.2	GCO 121.725	UNICOM 122.8 (CTAF)
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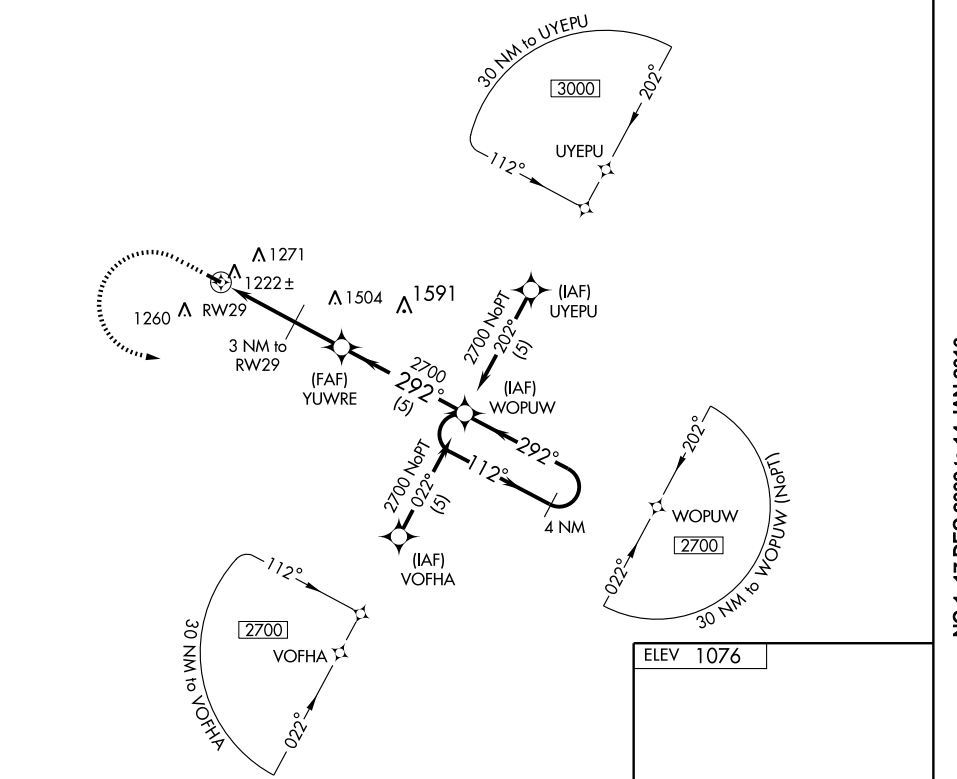


CATEGORY	A	B	C	D
S-33	1500-3/4	489 (500-3/4)	1500-1 1/4 489 (500-1 1/4)	1500-1 1/2 489 (500-1 1/2)
CIRCLING	1500-1	489 (500-1)	1500-1 1/2 489 (500-1 1/2)	1740-2 1/4 729 (800-2 1/4)
DME MINIMUMS				
S-33	1420-3/4	409 (500-3/4)	1420-1 1/4	409 (500-1 1/4)
CIRCLING	1440-1 429 (500-1)	1480-1 469 (500-1)	1480-1 1/2 469 (500-1 1/2)	1740-2 1/4 729 (800-2 1/4)

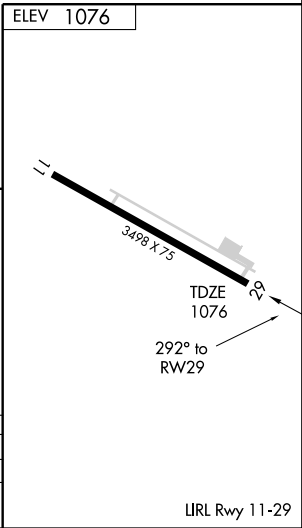
Use Redwood Falls altimeter setting.
GPS or RNP- 0.3 required. DME/DME RNP- 0.3 NA.

MISSED APPROACH: Climb to 2000 then climbing left turn to 2700 direct WOPUW WP and hold.

AWOS-3 119.275	MINNEAPOLIS CENTER 127.1 290.2	UNICOM 122.8 (CTAF)
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2000	2700	WOPUW		
<div><div><div>3 NM to RW29</div><div>3.03° TCH 45</div></div><div>YUWRE</div><div>WOPUW</div><div>4 NM Holding Pattern</div></div>				
<div><div><div>RW29</div><div>2060</div></div><div>2700</div><div>2700</div></div>				
<div><div>3 NM</div><div>1.9 NM</div><div>5 NM</div></div>				
CATEGORY	A	B	C	D
LNNAV MDA	1580-1	504 (600-1)	1580-1½	504 (600-1½)
CIRCLING	1620-1	544 (600-1)	1680-1¾ 604 (700-1¾)	1680-2 604 (700-2)



NC-1. 17 DEC 2009 to 14 JAN 2010

VOR/DME or GPS-A

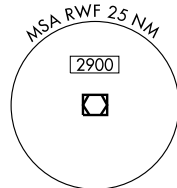
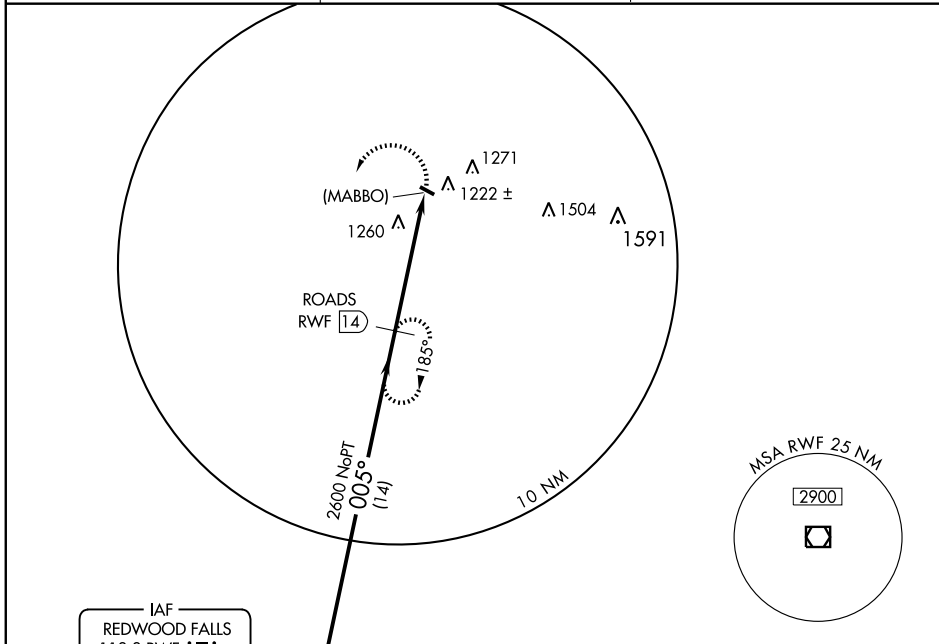
OLIVIA RGNL (OVL)

VOR/DME RWF 113.3 Chan 80	APP CRS 005°	Rwy Idg TDZE Apt Elev N/A N/A 1076
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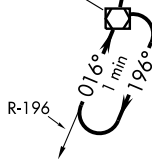
NA Use Redwood Falls, MN altimeter setting.

MISSED APPROACH: Climbing left turn to 2600 via RWF R-005 to ROADS 14 DME and hold.

AWOS-3 119.275	MINNEAPOLIS CENTER 127.1 290.2	UNICOM 122.8 (CTAF)
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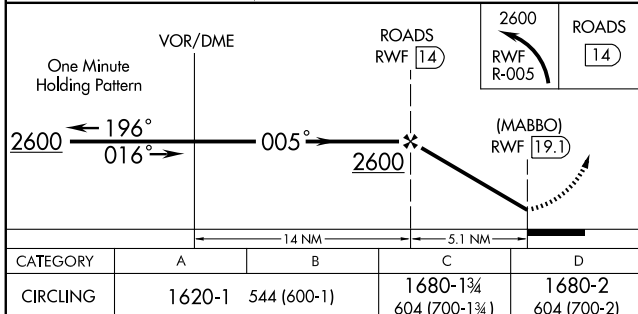
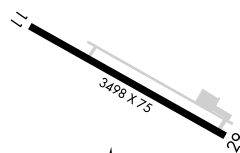


IAF
REDWOOD FALLS
113.3 RWF
Chan 80



NoPT for arrivals on
RWF vor/dme airway
radials 103 CW 283

ELEV 1076



005° 5.1 NM
from FAF

URL Rwy 11-29

GPS RWY 13

ORR RGNL(ORB)

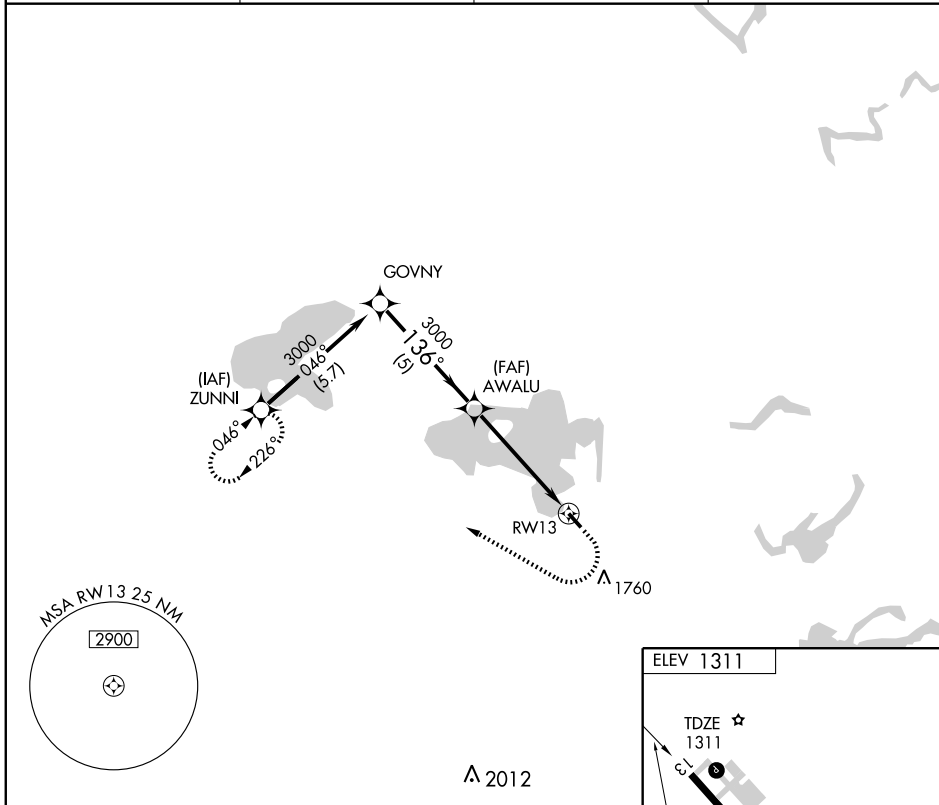
APP CRS	Rwy Idg	4001
136°	TDZE	1311
	Apt Elev	1311



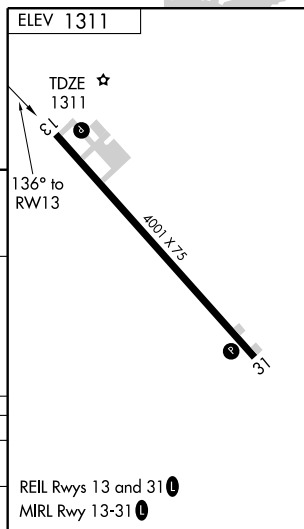
NA

MISSED APPROACH: Climb to 2500 then climbing right turn to 3000 direct ZUNNI WP and hold.

AWOS-3 118.325	MINNEAPOLIS CENTER 120.9 377.1	GCO 121.725	UNICOM 122.8 (CTAF) 1
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	GOVNY	AWALU	2500	3000	ZUNNI
	3000	136°	3000		
Procedure Turn NA					
	5 NM	3.6 NM	1.4 NM		
CATEGORY	A	B	C	D	
S-13	1760-1	449 (500-1)	1760-1½ 449 (500-1½)	1760-1½ 449 (500-1½)	
CIRCLING	1880-1 569 (600-1)	1900-1 589 (600-1)	1900-1½ 589 (600-1½)	2120-2½ 809 (900-2½)	



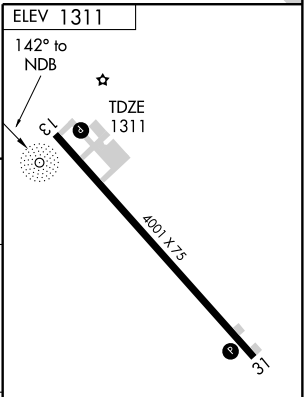
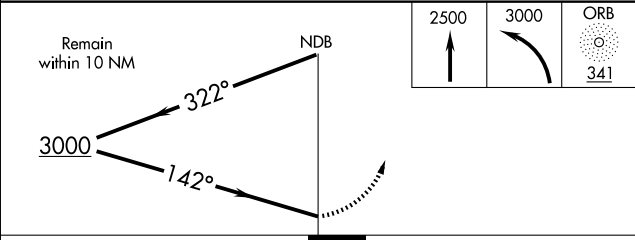
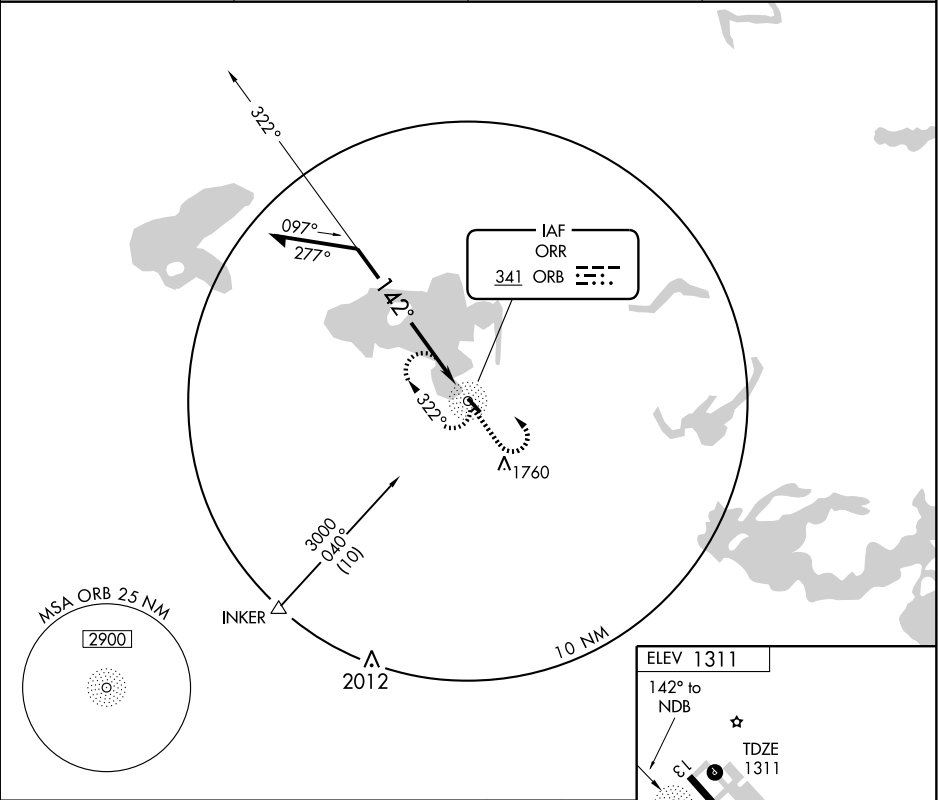
REIL Rwy 13 and 31 **1**
MRL Rwy 13-31 **1**

NDB RWY 13
ORR RGNL (ORB)

NDB ORB	APP CRS	Rwy Idg	4001
341	142°	TDZE	1311
		Apt Elev	1311

NA	
AWOS-3	MINNEAPOLIS CENTER
118.325	120.9 377.1

MISSED APPROACH: Climb to 2500 then climbing left turn to 3000 direct ORB NDB and hold.	
GCO	UNICOM
121.725	122.8 (CTAF) 0



CATEGORY	A	B	C	D
S-13	2000-1 689 (700-1)		2000-2 689 (700-2)	2000-2 ¼ 689 (700-2 ¼)
CIRCLING	2000-1 689 (700-1)		2000-2 689 (700-2)	2120-2 ½ 809 (900-2 ½)

REIL Rwy 13 and 31 0
MIRL Rwy 13-31 0

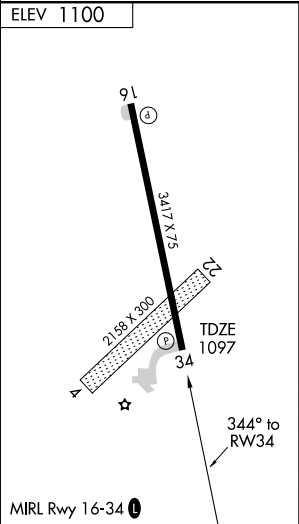
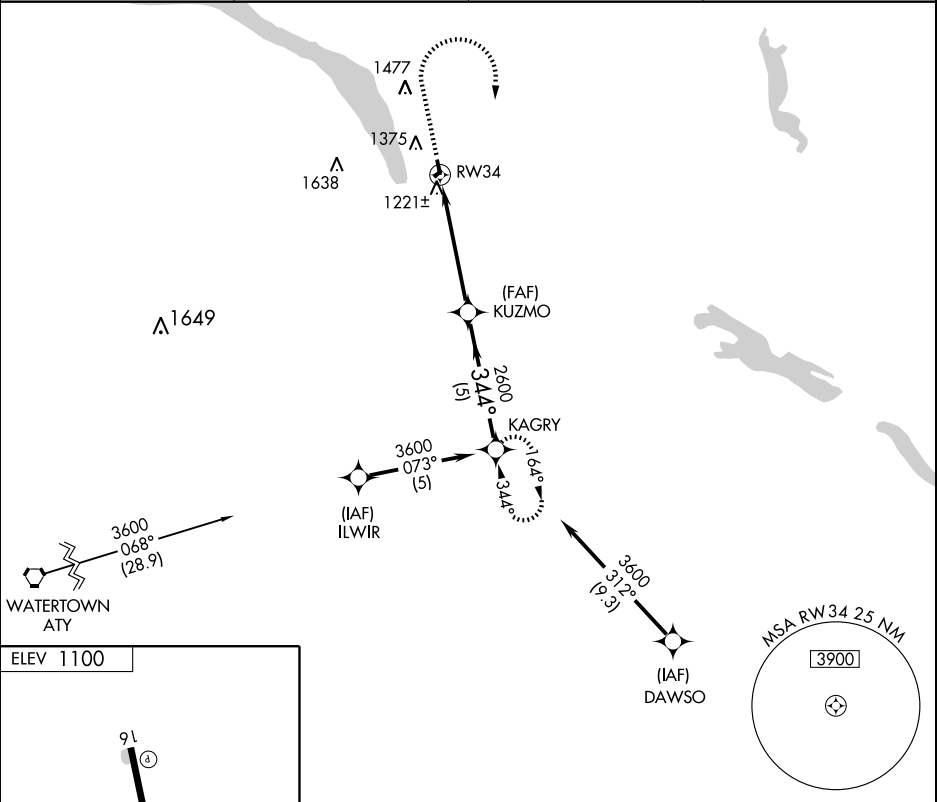
GPS RWY 34

ORTONVILLE MUNI-MARTINSON FIELD (VVV)

APP CRS	Rwy Idg	3417
344°	TDZE	1097
	Apt Elev	1100

<div><div>▽</div><div>△NA</div></div>	MISSED APPROACH: Climb to 3600 then right turn direct KAGRY WP and hold.
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AWOS-3 332.0	MINNEAPOLIS CENTER 128.5 306.2	GCO 121.725	UNICOM 122.8 (CTAF) 1
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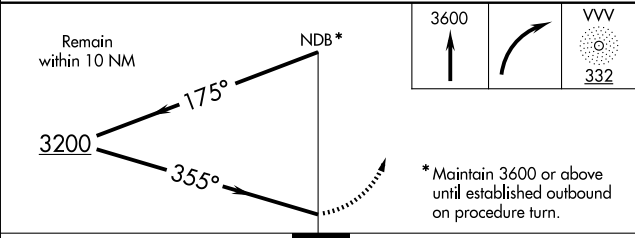
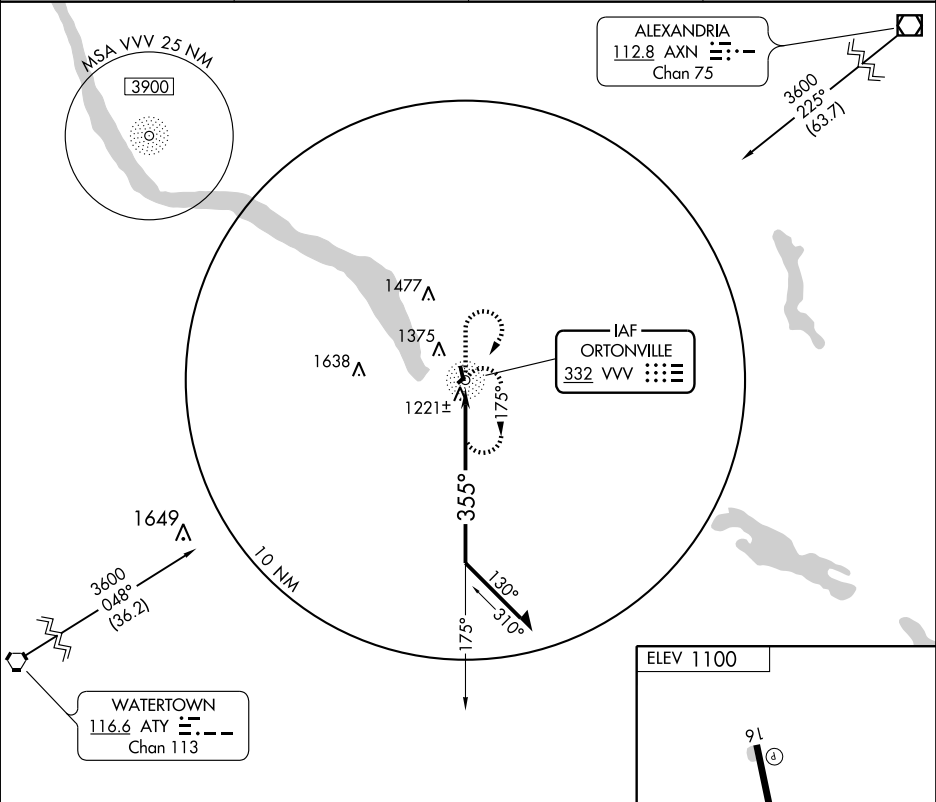
<div><div><div>3600</div><div>↑</div></div><div><div>↷</div></div><div><div>KAGRY</div><div>✦</div></div></div>				
<div><div><div>RW34</div><div>↶</div></div><div><div>KUZMO</div><div>✱</div></div><div><div>KAGRY</div><div>344°</div></div><div><div>3600</div></div><div><div>Procedure Turn NA</div></div></div>				
<div><div>5 NM</div><div>5 NM</div></div>				
CATEGORY	A	B	C	D
S-34	1540-1	443 (500-1)	1540-1¼ 443 (500-1¼)	NA
CIRCLING	1740-1	640 (700-1)	1740-1¾ 640 (700-1¾)	NA

NDB RWY 34

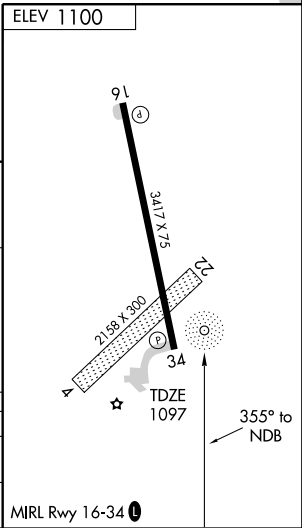
ORTONVILLE MUNI-MARTINSON FIELD (VTV)

NDB VVV	APP CRS	Rwy Idg	3417
332	355°	TDZE	1097
		Apt Elev	1100

 NA		MISSED APPROACH: Climb to 3600 then right turn direct VVV NDB and hold.	
AWOS-3 332.0	MINNEAPOLIS CENTER 128.5 306.2	GCO 121.725	UNICOM 122.8 (CTAF) 0



CATEGORY	A	B	C	D
S-34	1660-1	563 (600-1)	1660-1½ 563 (600-1½)	NA
CIRCLING	1740-1	640 (700-1)	1740-1¾ 640 (700-1¾)	NA



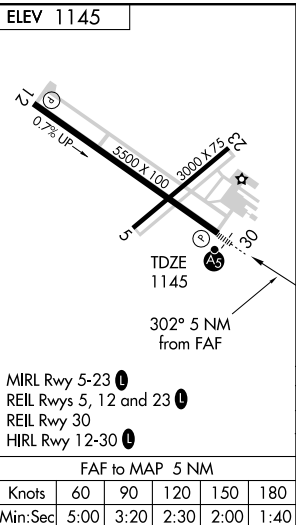
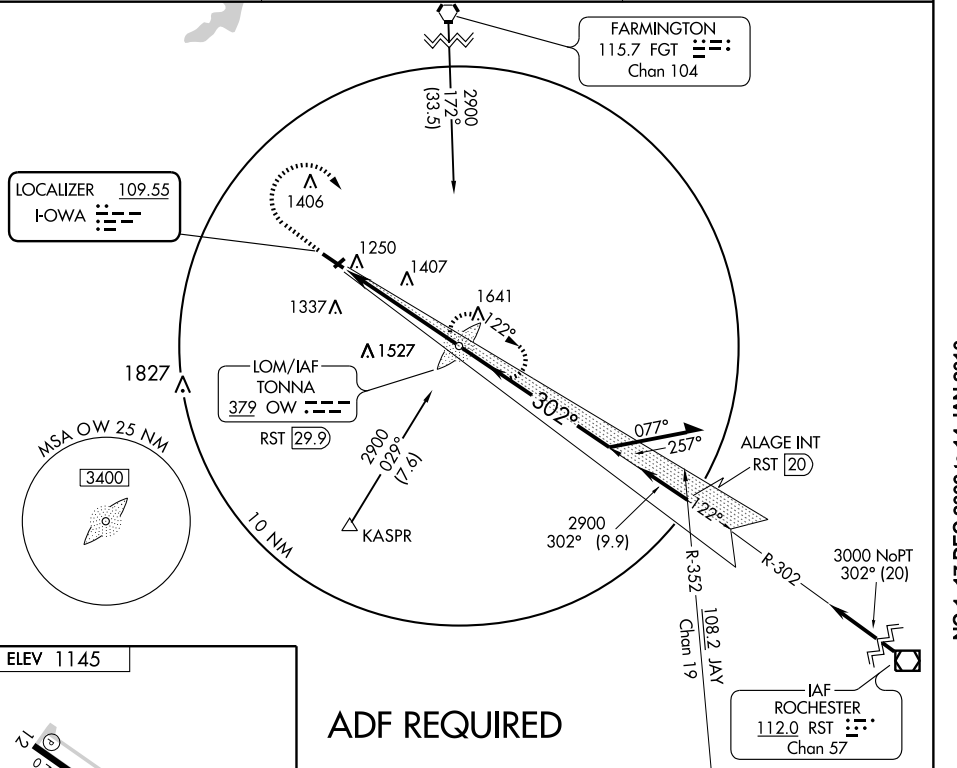
NA

MALSR

MISSED APPROACH

Climb to 2000 then climbing right turn to 2900 direct TONNA LOM and hold.

AWOS-3 128.325	ROCHESTER APP CON ★ 119.8 251.125	UNICOM 122.7 (CTAF) 1
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ADF REQUIRED

2000

2900

OW 379

LOM RST 29.9

2806

122°

302°

2900

2900

5 NM

GS 3.00° TCH 52

Remain within 10 NM

CATEGORY	A	B	C	D
S-ILS 30	1345-½		200 (200-½)	
S-LOC 30	1680-½	535 (600-½)	1680-1 535 (600-1)	1680-1¼ 535 (600-1¼)
CIRCLING	1680-1	535 (600-1)	1720-1½ 575 (600-1½)	1720-2 575 (600-2)

NC-1. 17 DEC 2009 to 14 JAN 2010

APP CRS	Rwy Idg	5500
122°	TDZE	1110
	Apt Elev	1145

RNAV (GPS) RWY 12

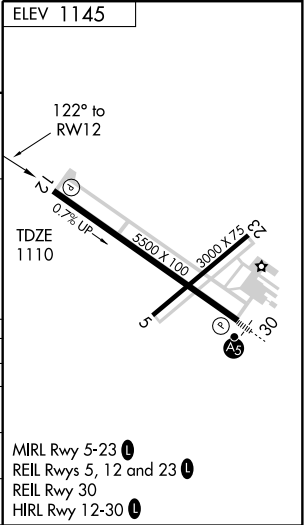
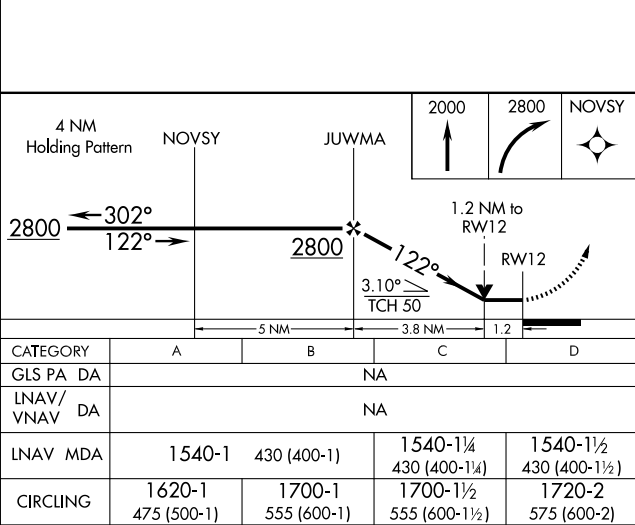
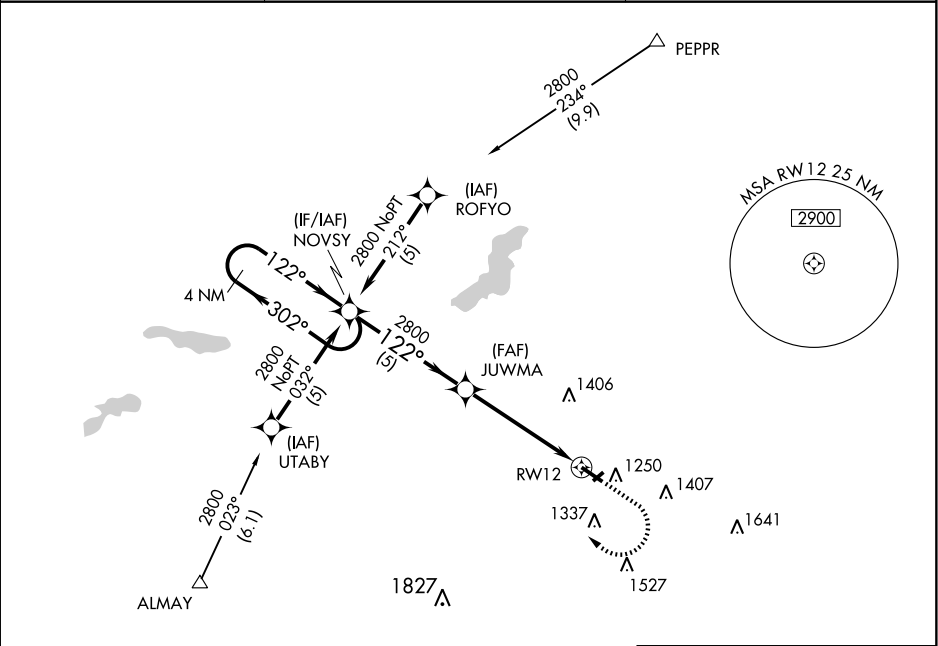
OWATONNA DEGNER RGNL (OWA)

NA

GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 2000 then climbing right turn to 2800 direct NOVSY WP and hold.

AWOS-3 128.325	ROCHESTER APP CON ★ 119.8 251.125	UNICOM 122.7 (CTAF) 0
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VOR/DME FOW 111.2 Chan 49	APP CRS 134°	Rwy Idg 5500 TDZE 1110 Apt Elev 1145
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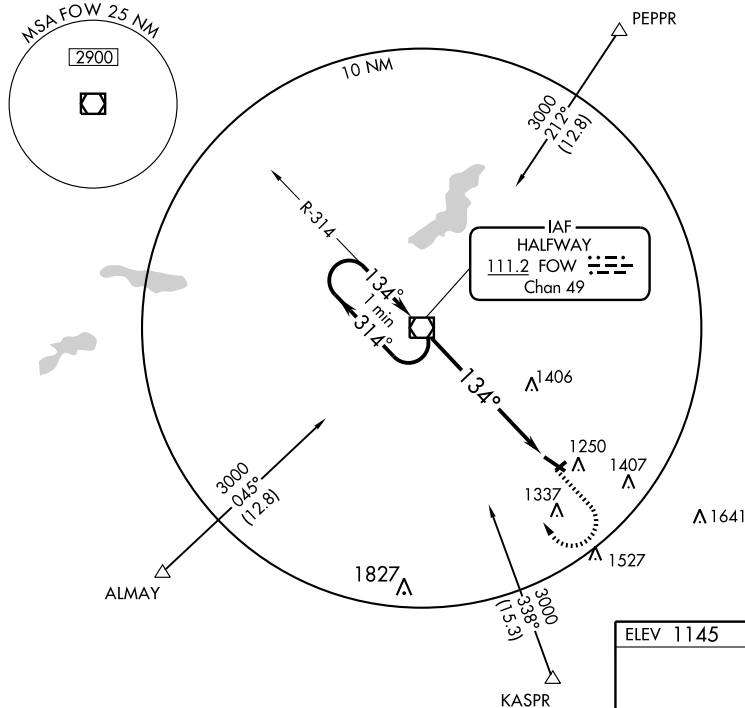
VOR RWY 12
OWATONNA DEGNER RGNL (OWA)



MISSED APPROACH Climb to 2000 then climbing right turn to 3000 direct FOW VOR/DME and hold.

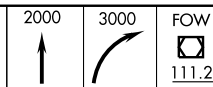
AWOS-3
128.325

ROCHESTER APP CON ★
119.8 251.125

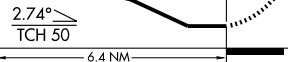
UNICOM
122.7 (CTAF) **L**

One Minute Holding Pattern

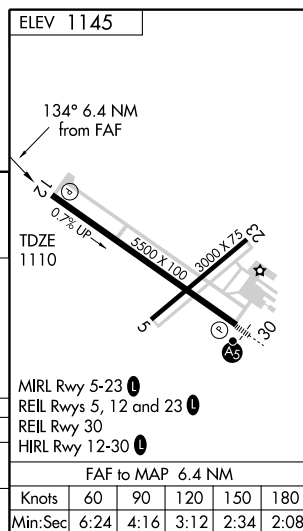
VOR/DME


$$\begin{array}{r} 3000 \\ \hline \end{array} \begin{array}{l} \leftarrow 314^\circ \\ 134^\circ \end{array}$$
FOW


VGSI and descent angles not coincident



CATEGORY	A	B	C	D
S-12	1560-1	450 (500-1)	1560-1¼ 450 (500-1¼)	1560-1½ 450 (500-1½)
CIRCLING	1620-1 475 (500-1)	1700-1 555 (600-1)	1700-1½ 555 (600-1½)	1720-2 575 (600-2)



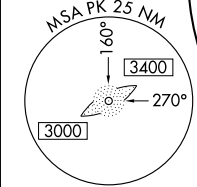
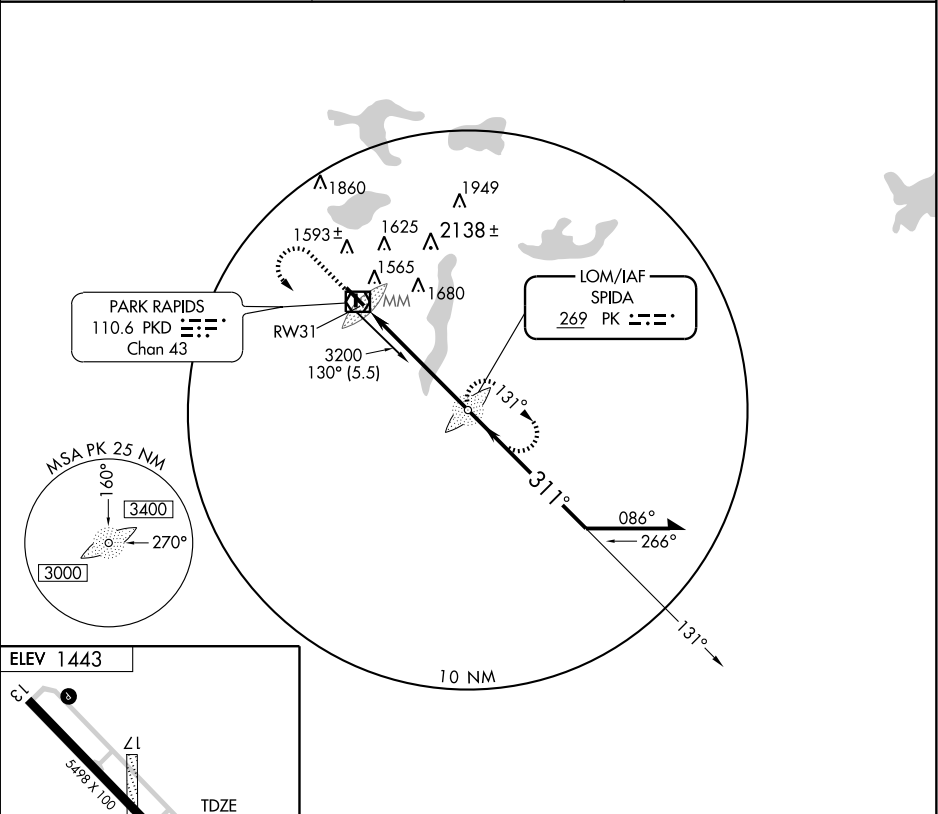
LOM PK	APP CRS	Rwy Idg	5498
269	311°	TDZE	1443
		Apt Elev	1443

NDB or GPS RWY 31

PARK RAPIDS MUNI-KONSHOK FIELD (PKD)

NA	MALSR	MISSED APPROACH: Climb to 3200, then left turn direct PK LOM and hold.
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ASOS 110.6	PRINCETON RADIO 122.1R	UNICOM 123.0 (CTAF)
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ELEV 1443
3244 X 140
TDZE 1443
1549±
311° 5.3 NM from FAF
HIRL Rwy 13-31
MIRL Rwy 13-31
REIL Rwy 13
FAF to MAP 5.3 NM
Knots 60 90 120 150 180
Min:Sec 5:18 3:32 2:39 2:07 1:46

3200	PK 269	LOM	131°	3200	311°	3200	Remain within 10 NM
RW31	≤ 3.09°	TCH 33	5.3 NM				
CATEGORY	A	B	C	D			
S-31	1860-¾	417 (500-¾)		1860-1	417 (500-1)		
CIRCLING	1920-1	477 (500-1)	1920-1½	2000-2	557 (600-2)		

VOR/DME PKD 110.6 Chan 43	APP CRS 136°	Rwy Idg 5498 TDZE 1443 Apt Elev 1443
---	------------------------	---

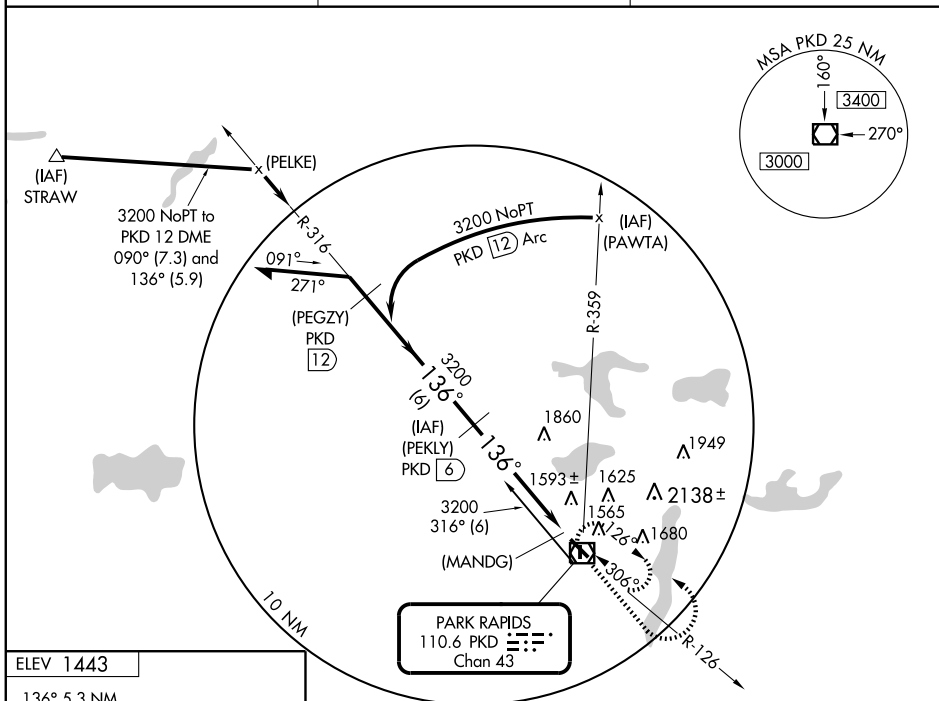
VOR/DME or GPS RWY 13
PARK RAPIDS MUNI-KONSHOK FIELD (PKD)

MISSED APPROACH: Climb to 3200 via heading 130° then left turn direct PKD VOR/DME and hold.

ASOS
110.6

PRINCETON RADIO
122.1R

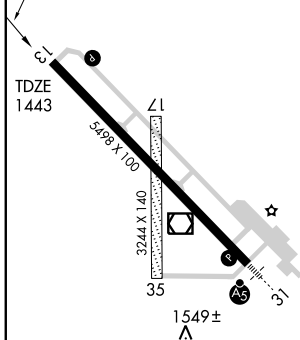
UNICOM
123.0 (CTAF) **L**



ELEV 1443

136° 5.3 NM
/ from FAF

TDZE
1443



Remain
within 10 NM

3200

--	--

PKD

(MANDG)
PKD
1

 3.04°

TCH 34

CATEGORY	A	B	C	D
S-13	1860-1	417 (500-1)	1860-1½	417 (500-1½)
CIRCLING	1920-1	477 (500-1)	1920-1½ 477 (500-1½)	2000-2 557 (600-2)

HIRL Rwy 13-31 **L**MIRL Rwy 13-31 **L**REIL Rwy 13 **L**

VOR/DME PKD
110.6
Chan **43**

APP CRS
306°

Rwy Idg
TDZE
Apt Elev

5498
1443
1443

VOR RWY 31

PARK RAPIDS MUNI-KONSHOK FIELD (PKD)

For inoperative MALSR, increase Cat. D S-31. DME minimums visibility ¼ mile.

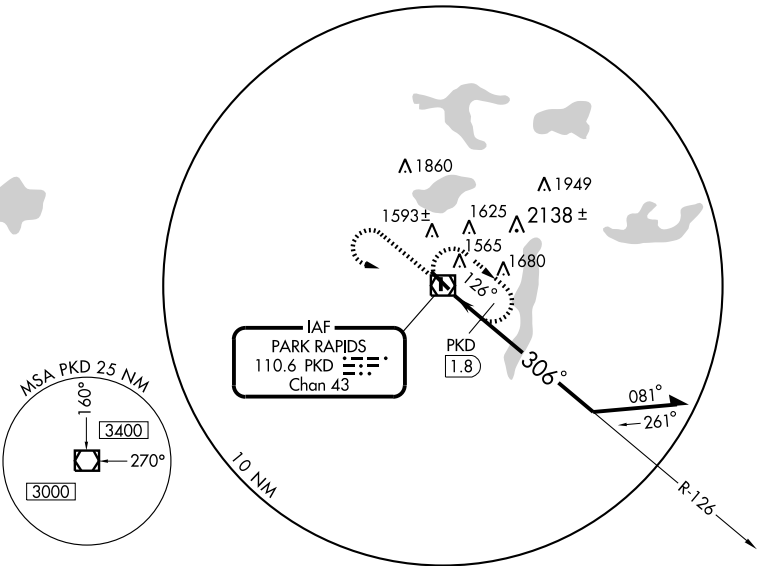


MISSED APPROACH: Climb to 3200, then left turn direct PKD VOR/DME and hold.

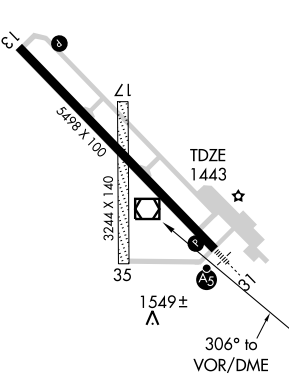
ASOS
110.6

PRINCETON RADIO
122.1R

UNICOM
123.0 (CTAF) **0**



ELEV **1443**



HIRL Rwy 13-31 **0**
MIRL Rwy 13-31 **0**
REIL Rwy 13 **0**

3200

↑

↷

PKD

110.6

VOR/DME

126°

306°

PKD

1.8

1880

3100

1.6 NM

Remain within 10 NM

CATEGORY	A	B	C	D
S-31	1880-½ 437 (500-½)		1880-¾ 437 (500-¾)	1800-1 437 (500-1)
CIRCLING	1920-1 477 (500-1)		1920-1½ 477 (500-1½)	2000-2 557 (600-2)
DME MINIMUMS				
S-31	1820-½ 377 (400-½)			1820-1 377 (400-1)
CIRCLING	1920-1 477 (500-1)		1920-1½ 477 (500-1½)	2000-2 557 (600-2)

GPS RWY 30

PERHAM MUNI (16D)

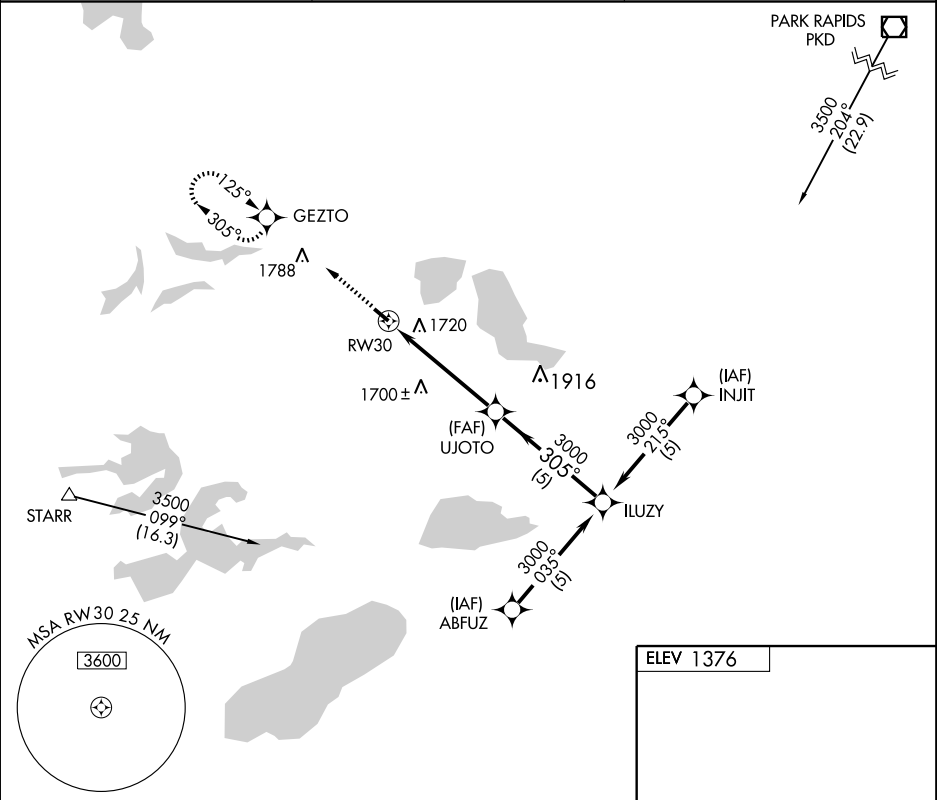
APP CRS	Rwy Idg	4100
305°	TDZE	1373
	Apt Elev	1376

NA

Use Detroit Lakes altimeter setting.

MISSED APPROACH: Climb to 3100 direct GEZTO WP and hold.

MINNEAPOLIS CENTER 126.1 269.2	GCO 121.725	CTAF 122.9 0
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3100
↑

GEZTO

UJOTO

ILUZY

RW30

3000

305°

3000

Procedure Turn NA

5 NM

5 NM

CATEGORY	A	B	C	D
S-30	2080-1	707 (800-1)	NA	
CIRCLING	2120-1 744 (800-1)	2120-1¼ 744 (800-1¼)	NA	

ELEV 1376

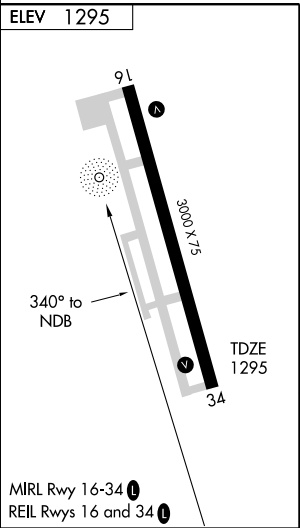
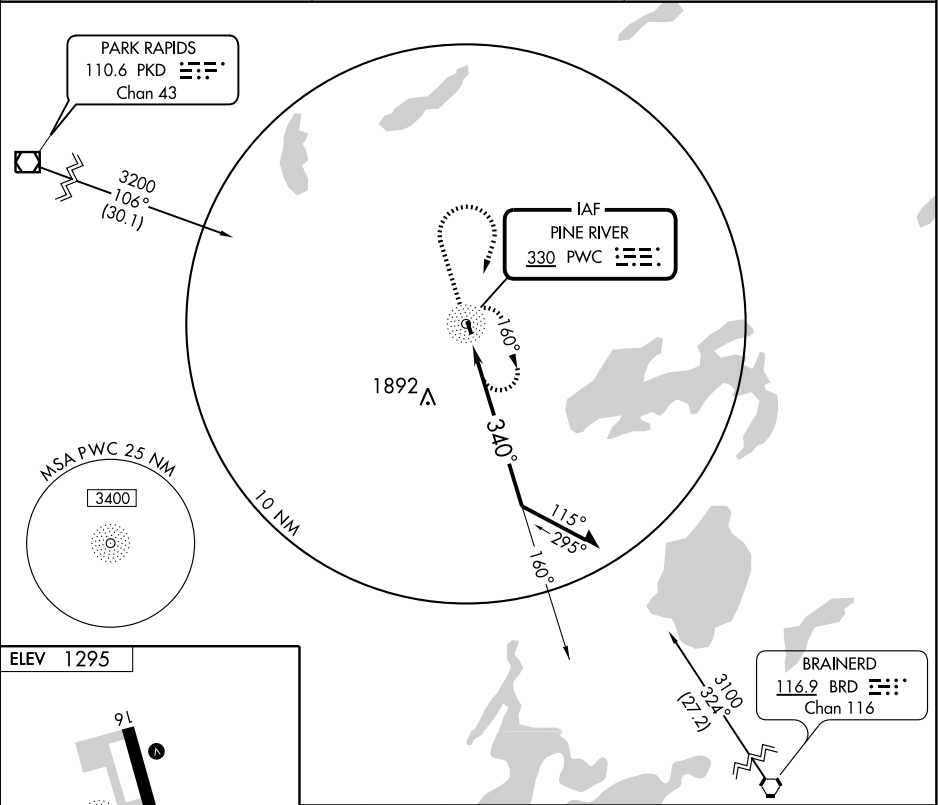
MRL Rwy 12-30 0
REIL Rwy 12-30 0



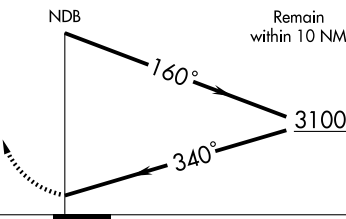
NDB PWC	APP CRS	Rwy Idg	3000
330	340°	TDZE	1295
		Apt Elev	1295

NDB RWY 34
PINE RIVER RGNL (PWC)

NA	MISSED APPROACH: Climb to 3100 then right turn direct PWC NDB and hold.
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ASOS-3 118.525	MINNEAPOLIS CENTER 118.05 239.0	CTAF 122.9
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3100 ↑		PWC  <u>330</u>		
CATEGORY	A	B	C	D
S-34	2060-1 765 (800-1)	2060-1¼ 765 (800-1¼)	2060-2¼ 765 (800-2¼)	NA
CIRCLING	2060-1 765 (800-1)	2060-1¼ 765 (800-1¼)	2060-2¼ 765 (800-2¼)	NA

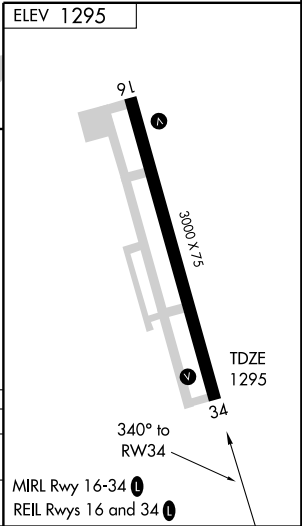
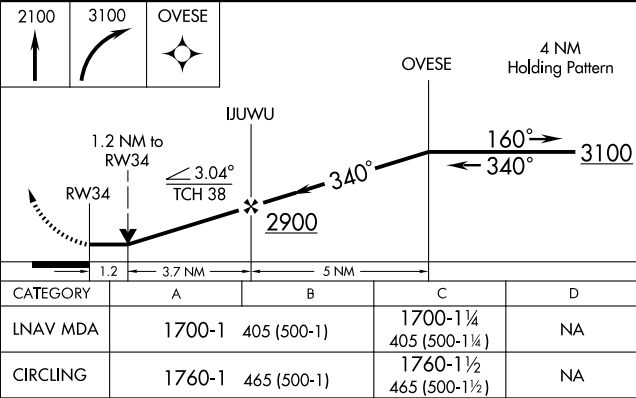
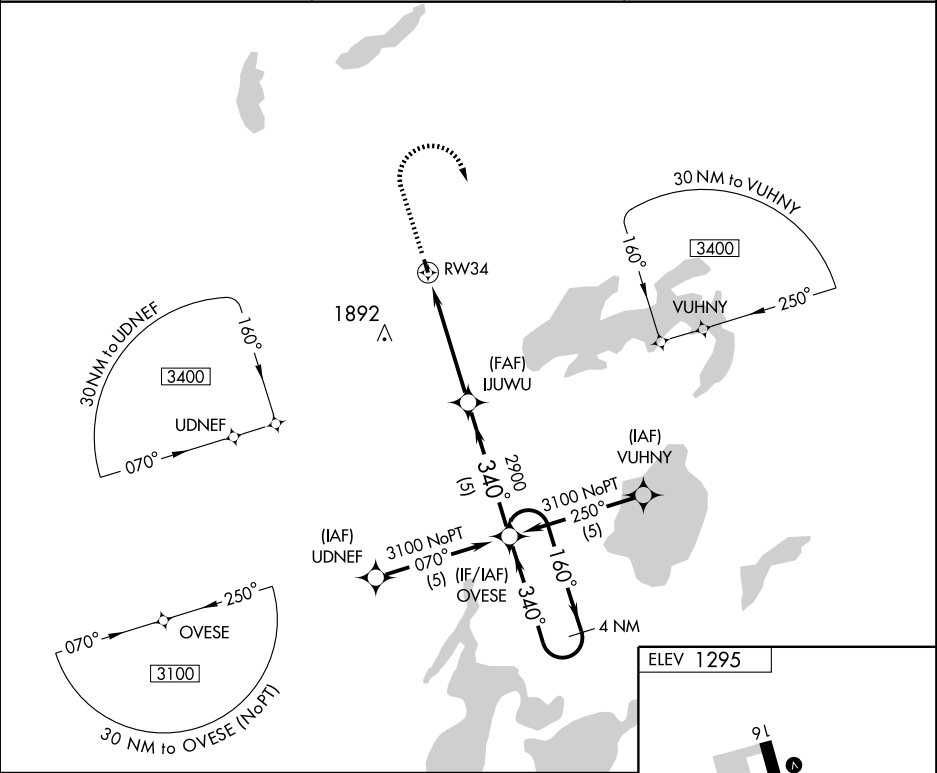
APP CRS	Rwy Idg	3000
340°	TDZE	1295
	Apt Elev	1295

RNAV (GPS) RWY 34

PINE RIVER RGNL (PWC)

<div>NA</div> <div>GPS or RNP- 0.3 required. DME/DME RNP- 0.3 NA.</div>	MISSED APPROACH: Climb to 2100 then climbing right turn to 3100 direct OVESE WP and hold.
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ASOS-3 118.525	MINNEAPOLIS CENTER 118.05 239.0	CTAF 122.9
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▲ NA


Use Roseau, MN altimeter setting.

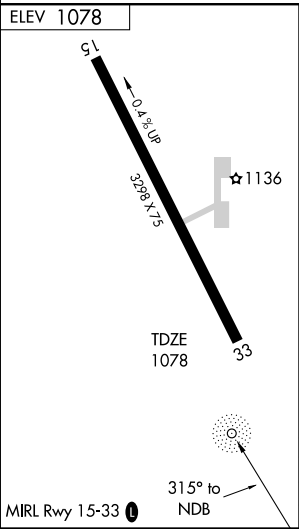
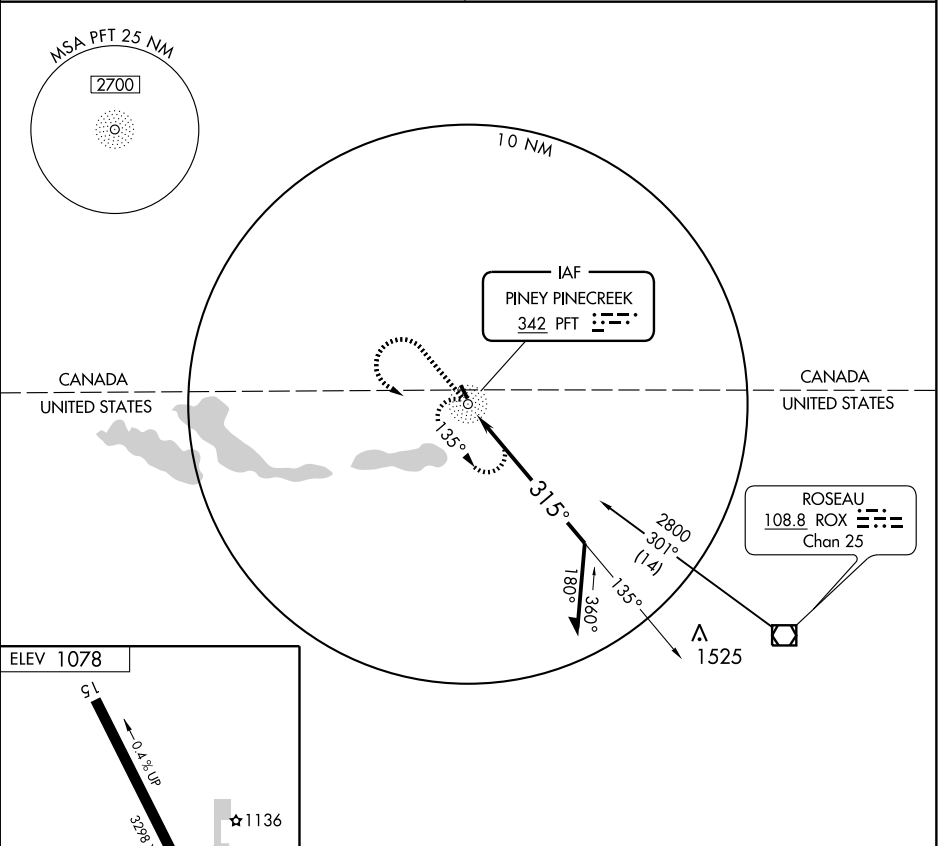
MINNEAPOLIS CENTER

134.75 251.1


MISSED APPROACH: Climb to 2800 then left turn direct PFT NDB and hold.


UNICOM

122.8 (CTAF) 




2800





PFT

342

NDB

135°

2800

315°

Remain within 10 NM

CATEGORY	A	B	C	D
S-33	1600-1	522 (600-1)	NA	
CIRCLING	1600-1	522 (600-1)	NA	

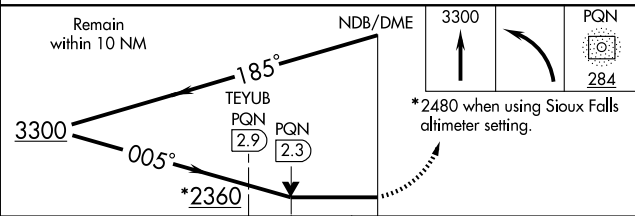
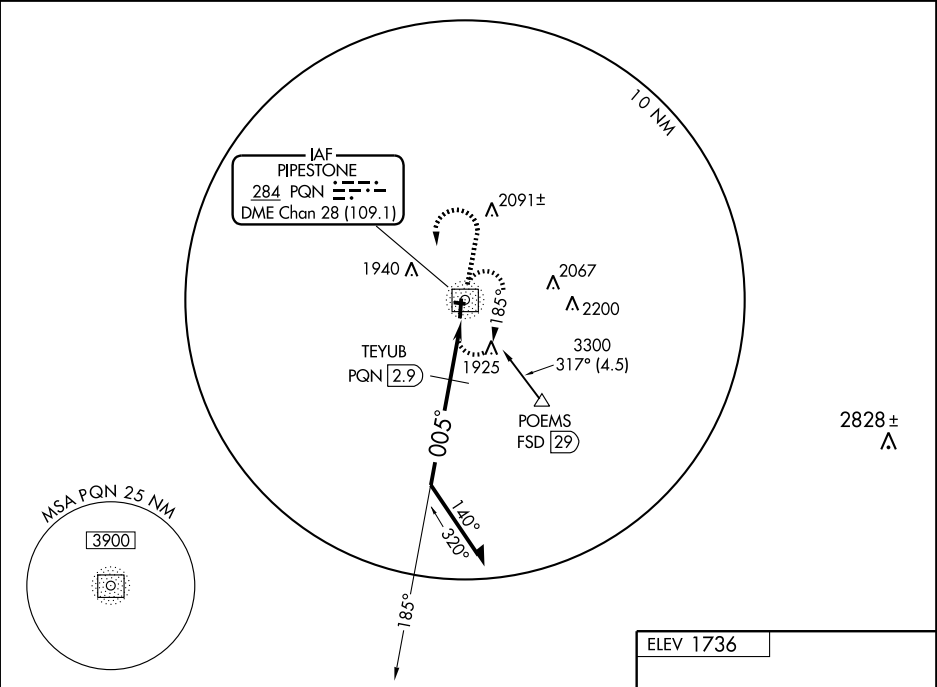
NDB/DME PQN 284	APP CRS 005°	Rwy Idg TDZE Apt Elev	4302 1734 1736
DME Chan 28 (109.1)			

NDB RWY 36
PIPESTONE MUNI (PQN)

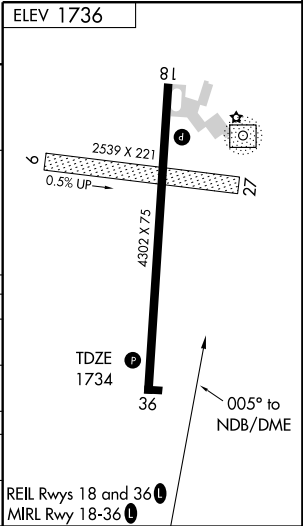
⚠ When local altimeter setting not received, use Sioux Falls altimeter setting and increase all MDAs 120 feet, S-36 Cat. B visibility ¼ mile, Cat. C visibility ½ mile and TEYUB FIX MINIMUMS Cat. C visibility ¼ mile.
VDP NA with Sioux Falls altimeter setting.

MISSED APPROACH: Climb to 3300 then left turn direct PQN NDB and hold.

AWOS-3 118.375	MINNEAPOLIS CENTER 132.05 317.4	GCO 121.725	UNICOM 122.8 (CTAF) 0
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CATEGORY	A	B	C	D
S-36	2360-1	626 (700-1)	2360-1¾ 626 (700-1¾)	NA
CIRCLING	2360-1	624 (700-1)	2360-1¾ 624 (700-1¾)	NA
TEYUB FIX MINIMUMS				
S-36	2280-1	546 (600-1)	2280-1½ 546 (600-1½)	NA
CIRCLING	2280-1	544 (600-1)	2280-1½ 544 (600-1½)	NA



APP CRS	Rwy Idg	4302
163°	TDZE	1736
	Apt Elev	1736

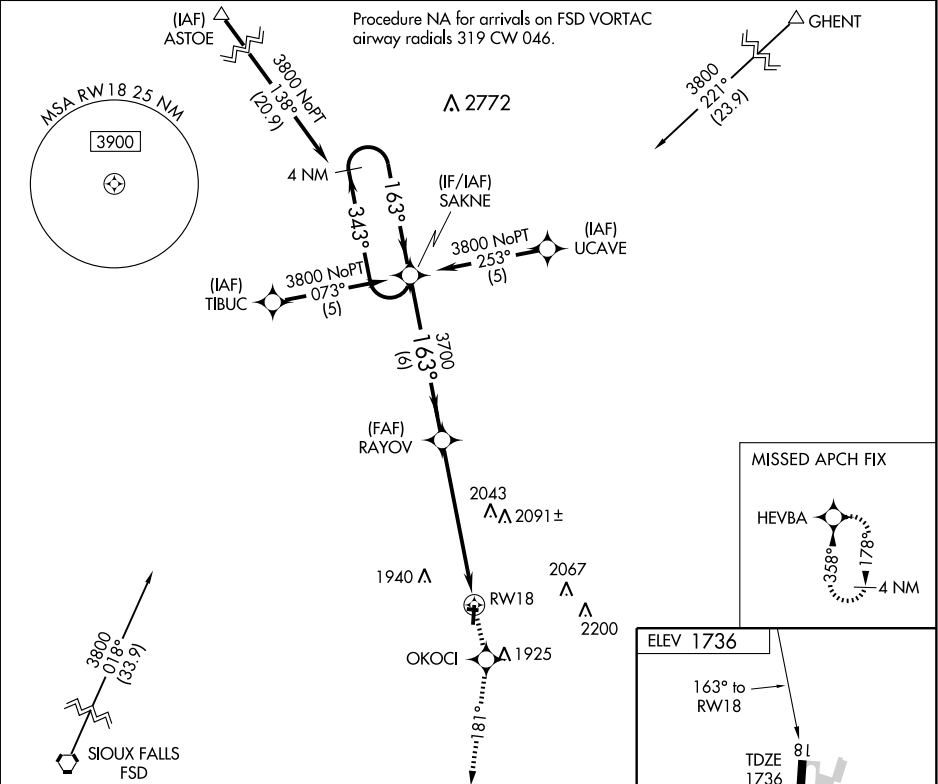
RNAV (GPS) RWY 18

PIPESTONE MUNI (PQN)

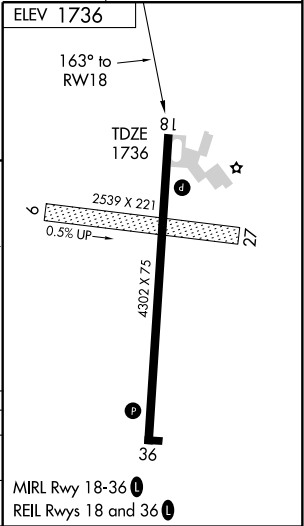
⚠ DME/DME RNP -0.3 NA.
⚠ When local altimeter setting not received, use Sioux Falls altimeter setting and increase all MDAs 120 feet and Cat C visibility ¼ mile. VDP NA with Sioux Falls altimeter setting.

MISSED APPROACH: Climb to 3300 direct OKOCI and via 181° track to HEVBA and hold.

AWOS-3 118.375	MINNEAPOLIS CENTER 132.05 317.4	GCO 121.725	UNICOM 122.8 (CTAF) 1
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4 NM Holding Pattern	SAKNE	3300	OKOCI	181° track	HEVBA
3800	343°	163°	RAYOV	1.3 NM to RWY 18	
VGSI and descent angles not coincident	3700	3.02° TCH 40			
	6 NM	4.7 NM	1.3		
CATEGORY	A	B	C	D	
LNAV MDA	2180-1	444 (500-1)	2180-1¼ 444 (500-1¼)	NA	
CIRCLING	2180-1 444 (500-1)	2200-1 464 (500-1)	2280-1½ 544 (600-1½)	NA	



APP CRS	Rwy Idg	4302
358°	TDZE	1734
	Apt Elev	1736

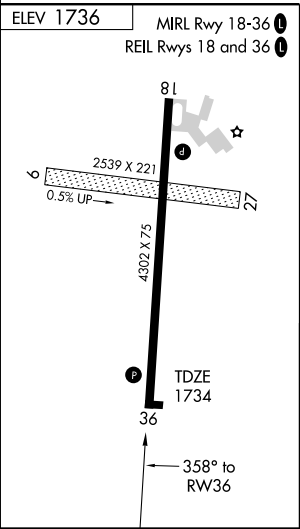
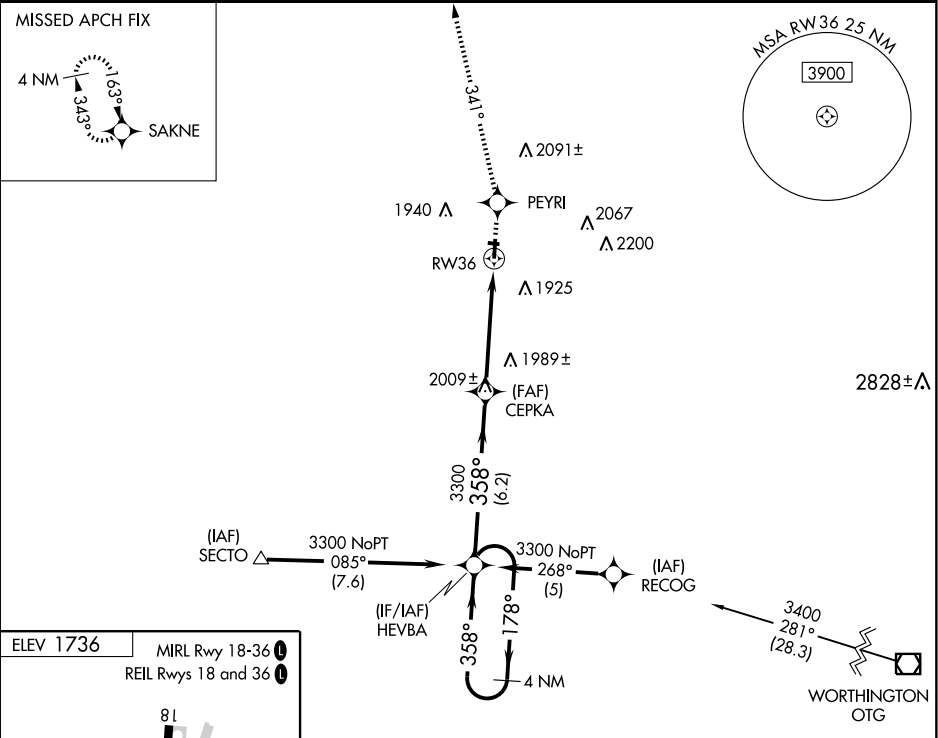
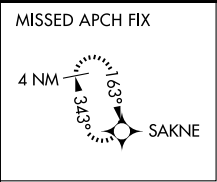
RNAV (GPS) RWY 36

PIESTONE MUNI (PQN)

⚠ DME/DME RNP -0.3 NA.
⚠ When local altimeter setting not received, use Sioux Falls altimeter setting and increase all MDAs 120 feet and Cat. C visibilities ¼ mile. VDP NA with Sioux Falls altimeter setting.

MISSED APPROACH: Climb to 3800 direct PEYRI and via 341° track to SAKNE and hold.

AWOS-3 118.375	MINNEAPOLIS CENTER 132.05 317.4	GCO 121.725	UNICOM 122.8 (CTAF) 0
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Procedure NA for arrivals at SECTO via V148 southwest bound and arrivals at OTG VOR/DME via V250 northeast bound.

4 NM Holding Pattern				HEVBA	CEVKA	3800	PEYRI	341° track	SAKNE
3300				178°	358°	3300	1.5 NM to RW36		
				358°			3.04° TCH 30		
				6.2 NM	3.3 NM	1.5			
CATEGORY	A		B		C		D		
LNAV MDA	2240-1		506 (600-1)		2240-1½ 506 (600-1½)		NA		
CIRCLING	2240-1		504 (600-1)		2280-1½ 544 (600-1½)		NA		

APP CRS	Rwy Idg	4001
286°	TDZE	1276
	Apt Elev	1276

RNAV (GPS) RWY 29

PRESTON/ FILLMORE COUNTY (FKA)

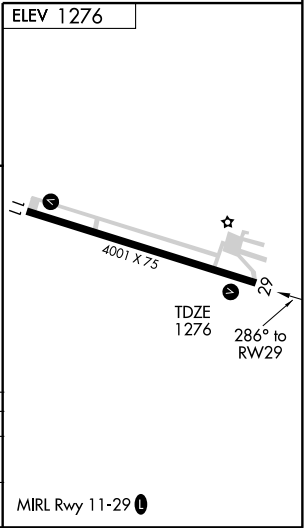
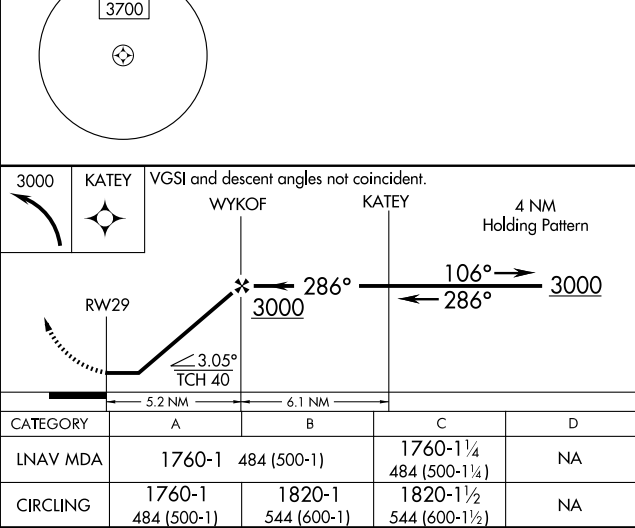
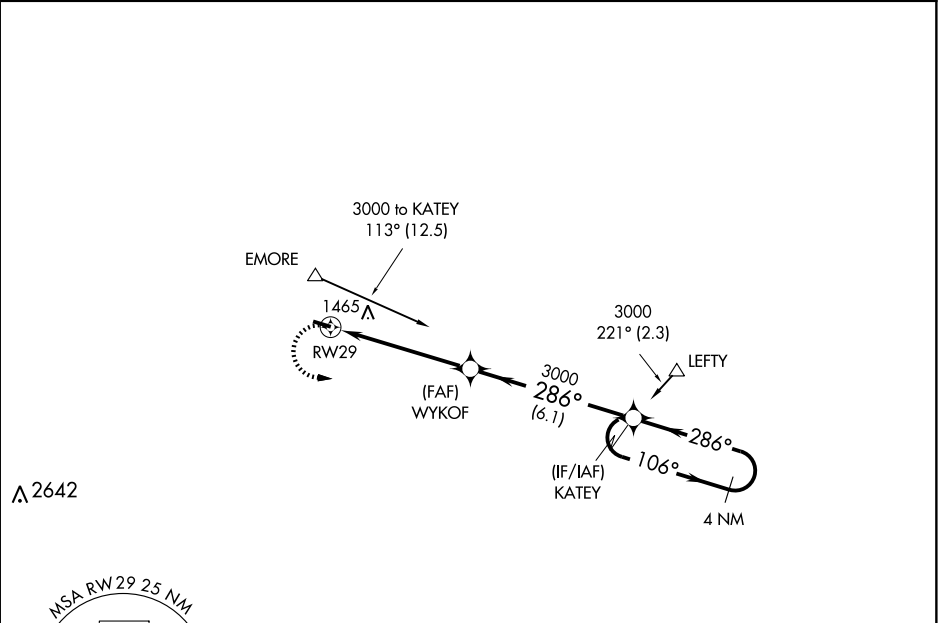
⚠ When VGSI inoperative, procedure NA at night.

⚠ DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.

When local altimeter setting not received, use Rochester Intl altimeter setting and increase all MDAs 60 feet and LNAV and Circling Cat. C visibilities ¼ mile.



MISSED APPROACH: Climbing left turn to 3000 direct KATEY and hold

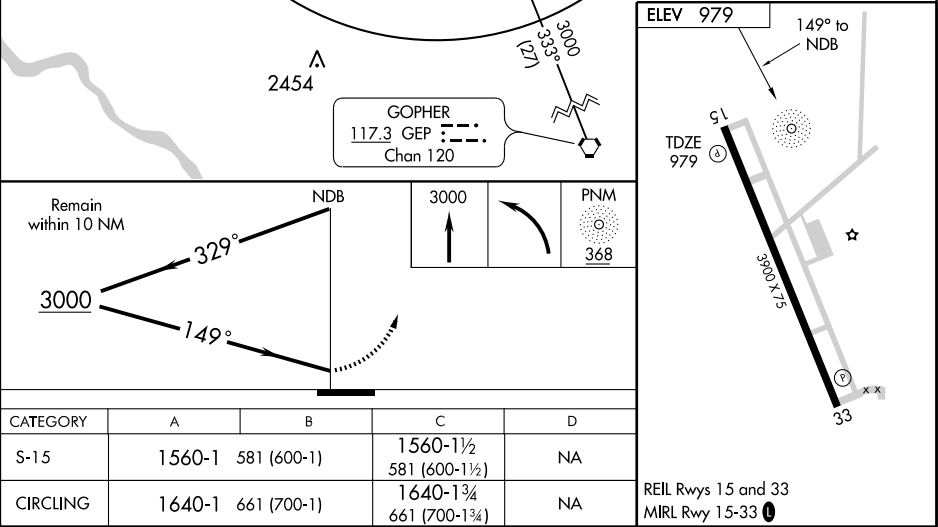
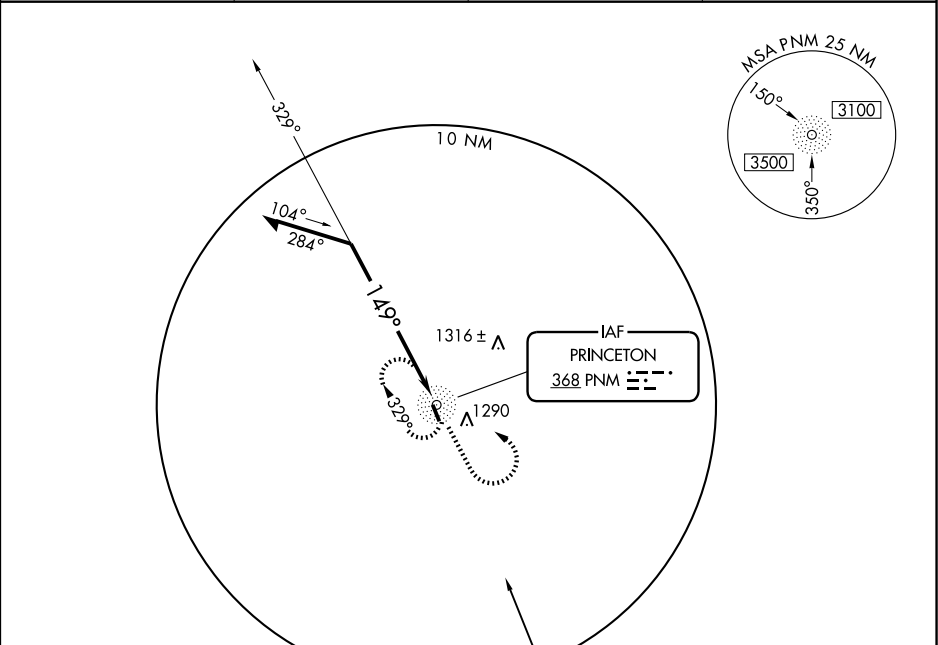
AWOS-3 118.550	ROCHESTER APP CON ★ 119.8 251.125	CTAF 122.9 0
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NDB RWY 15
PRINCETON MUNI (PNM)

NDB PNM	APP CRS	Rwy Idg	3900
368	149°	TDZE	979
		Apt Elev	979

		MISSED APPROACH: Climb to 3000 then left turn direct PNM NDB and hold.	
AWOS-3 119.025	MINNEAPOLIS CENTER 121.05 397.9	PRINCETON RADIO 122.2	UNICOM 123.0 (CTAF) 



APP CRS	Rwy Idg	3900
159°	TDZE	979
	Apt Elev	979

RNAV (GPS) RWY 15

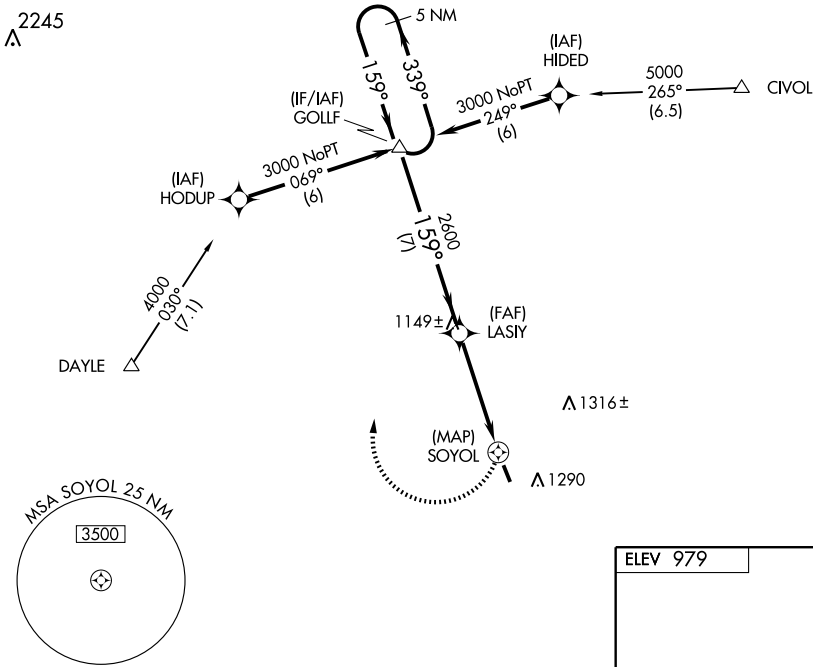
PRINCETON MUNI (PNM)

When VGSI inoperative, procedure NA at night.
DME/DME RNP-0.3 NA.
Circling Rwy 33 NA at night.

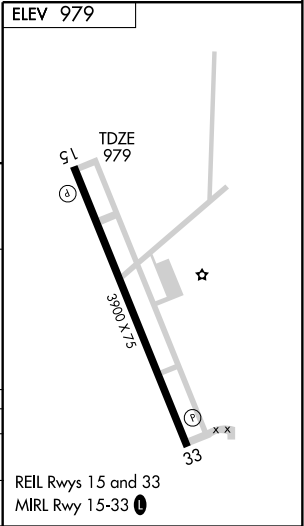
MISSED APPROACH: Climbing right turn to 3000 direct GOLFF and hold.

AWOS-3 119.025	MINNEAPOLIS CENTER 121.05 397.9	PRINCETON RADIO 122.2	UNICOM 123.0 (CTAF) 
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Procedure NA for arrivals on V413 southbound.



5 NM Holding Pattern				
GOLFF				
LASIY				
SOYOL				
3000				
339°				
159°				
159°				
3000				
7 NM				
4.5 NM				
0.5				
CATEGORY	A	B	C	D
LNAV MDA	1380-1	401 (500-1)	1380-1¼ 401 (500-1¼)	NA
CIRCLING	1640-1	661 (700-1)	1640-1¾ 661 (700-1¾)	NA



APP CRS	Rwy Idg	3900
335°	TDZE	979
	Apt Elev	979

RNAV (GPS) RWY 33

PRINCETON MUNI (PNM)



Procedure NA at night.
DME/DME RNP- 0.3 NA.

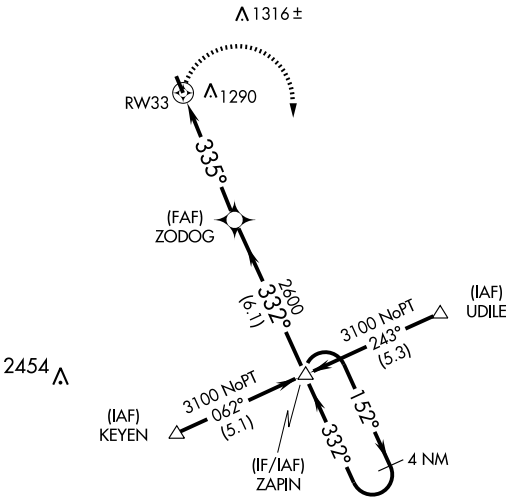
MISSED APPROACH: Climbing right turn to 3100 direct ZAPIN and hold.

AWOS-3
119.025

MINNEAPOLIS CENTER
121.05 397.9

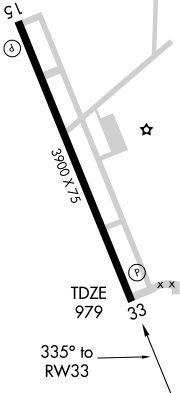
PRINCETON RADIO
122.2

UNICOM
123.0 (CTAF) **U**



ELEV 979

REIL Rwy 15 and 33
MIRL Rwy 15-33 **U**



		ZODOG		ZAPIN 4 NM Holding Pattern	
		$\leq 3.04^\circ$ TCH 41		152° 3100	
RW33		335°		332°	
4.9 NM		6.1 NM			
CATEGORY	A	B	C	D	
RNAV MDA	1500-1	521 (600-1)	1500-1½ 521 (600-1½)	NA	
CIRCLING	1640-1	661 (700-1)	1640-1¾ 661 (700-1¾)	NA	

AGUDE ONE ARRIVAL

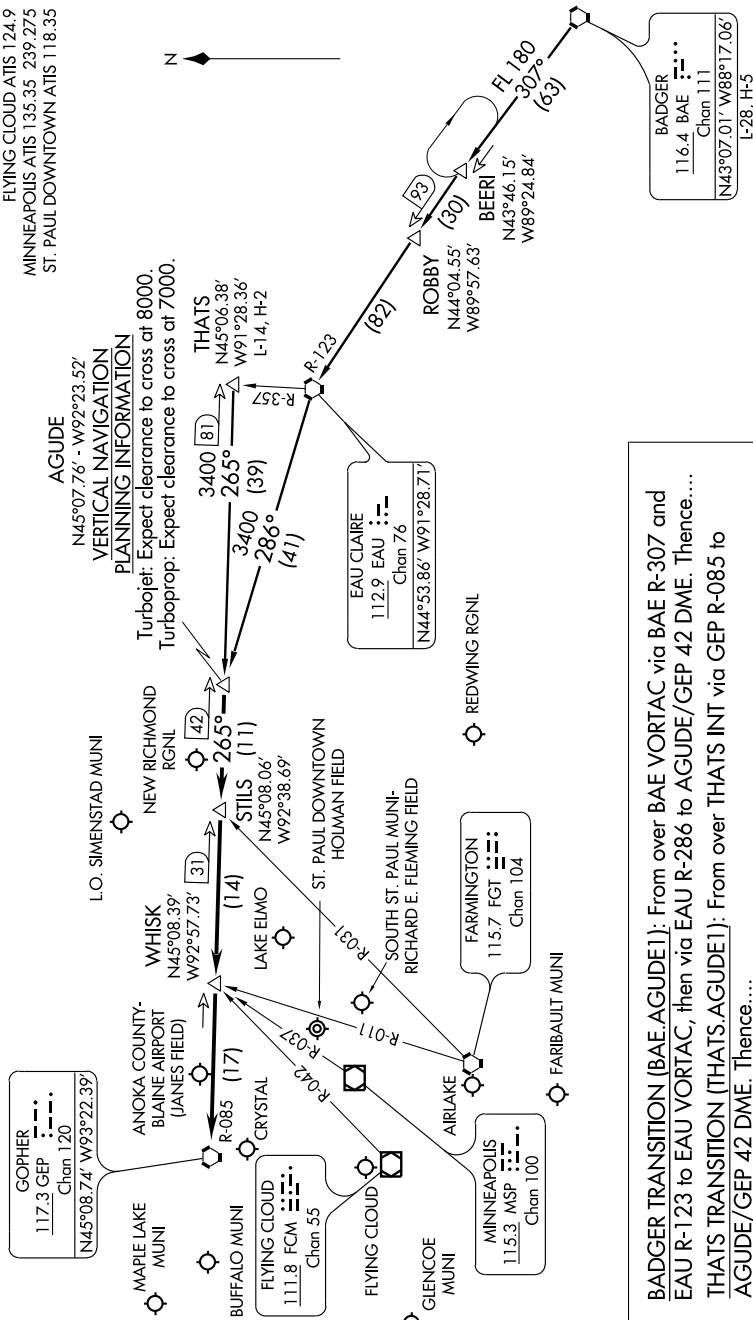
ST-263 (FAA)

MINNEAPOLIS-ST. PAUL, MINNESOTA

MINNEAPOLIS APP CON
126.95 335.5
ANOKA COUNTY ATIS 120.625
CRYSTAL ATIS 124.475
FLYING CLOUD ATIS 124.9
MINNEAPOLIS ATIS 135.35 239.275
ST. PAUL DOWNTOWN ATIS 118.35

AGUDE
N45°07.76' - W92°23.52'
VERTICAL NAVIGATION
PLANNING INFORMATION

Turbopjet: Expect clearance to cross at 8000.
Turboprop: Expect clearance to cross at 7000.



BADGER TRANSITION [BAE AGUDE1]: From over BAE VORTAC via BAE R-307 and EAU R-123 to EAU VORTAC, then via EAU R-286 to AGUDE/GEF 42 DME. Thence....
THATS TRANSITION [THATS.AGUDE1]: From over THATS INT via GEP R-085 to AGUDE/GEF 42 DME. Thence....
....From over AGUDE/GEF 42 DME via the GEP R-085 to GEP VORTAC, then expect radar vector to final approach course.

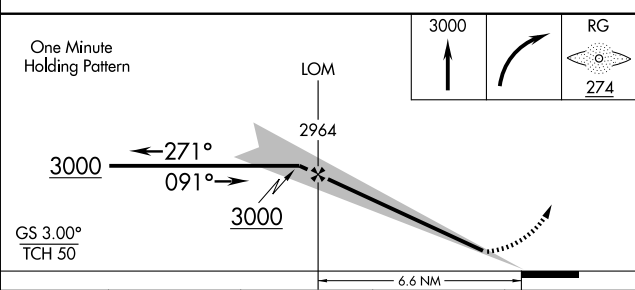
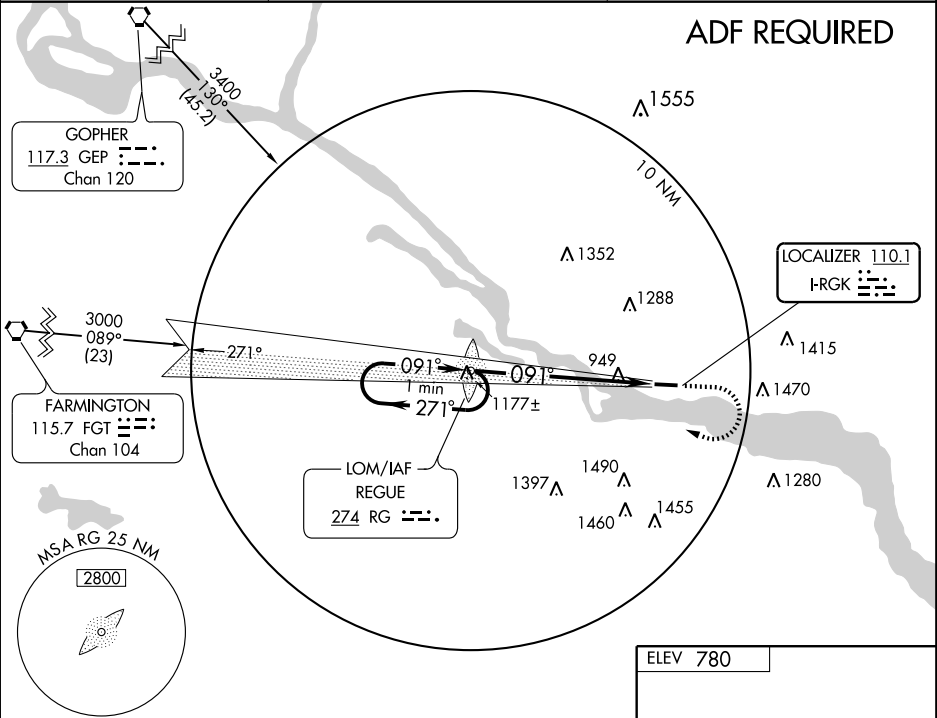
LOC I-RGK 110.1	APP CRS 091°	Rwy Idg TDZE Apt Elev	5010 778 780
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NA

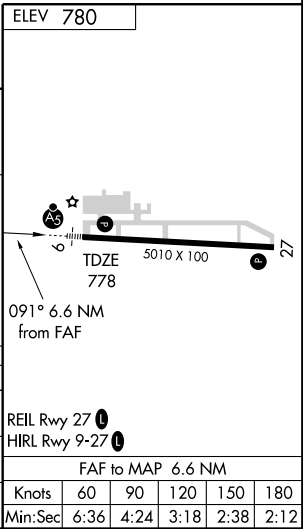
MALSR

MISSED APPROACH: Climb to 3000 then right turn direct REGUE LOM and hold.

AWOS-3 119.25	MINNEAPOLIS APP CON 121.2 357.4	UNICOM 123.05 (CTAF) 0
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CATEGORY	A	B	C	D
S-ILS 9	978-½ 200 (200-½)			
S-LOC 9	1380-½ 602 (600-½)	1380-1¼ 602 (600-1¼)	1380-1½ 602 (600-1½)	
CIRCLING	1480-1 700 (700-1)	1520-1 740 (800-1)	1540-2¼ 760 (800-2¼)	1540-2½ 760 (800-2½)

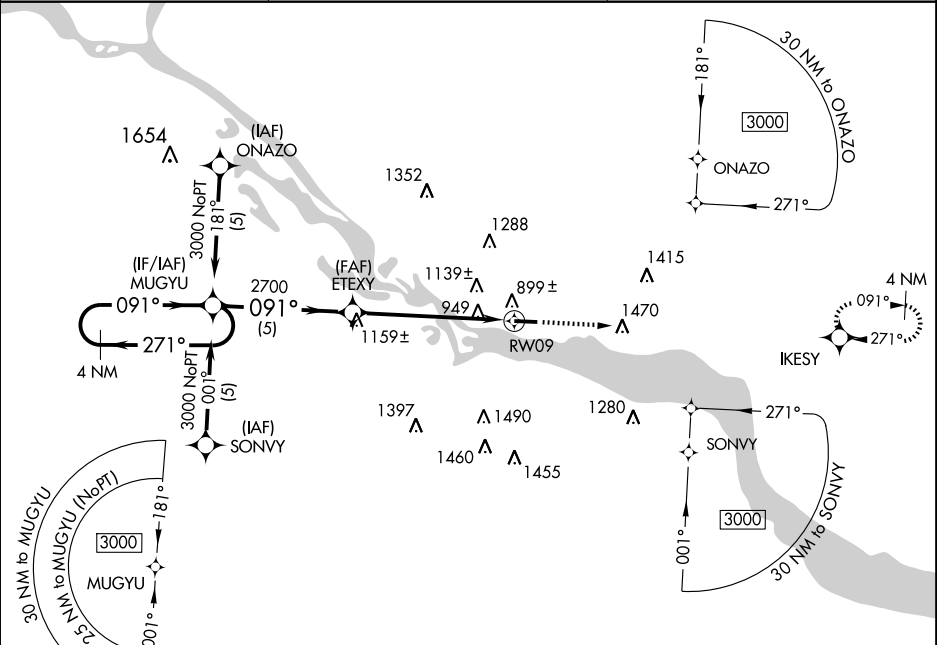


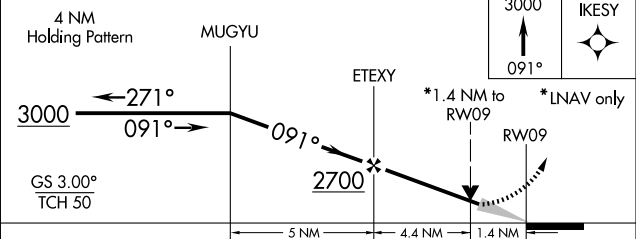
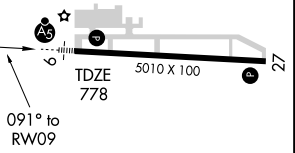
APP CRS 091°	Rwy Idg TDZE Apt Elev	5010 778 780
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RNAV (GPS) RWY 9
RED WING RGNL (RGK)

▼ Baro VNAV NA below -16°C (4°F).	MALSR 	MISSED APPROACH: Climb to 3000 via course 091° to IKESY WP and hold.
▲ NA GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.		

AWOS-3 119.25	MINNEAPOLIS APP CON 121.2 357.4	UNICOM 123.05 (CTAF) 1
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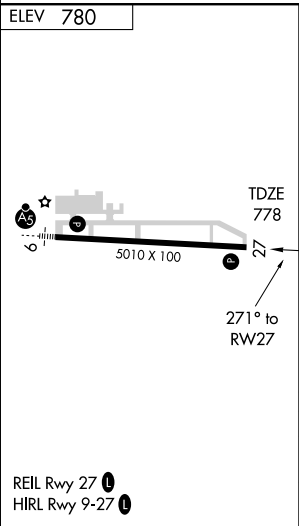
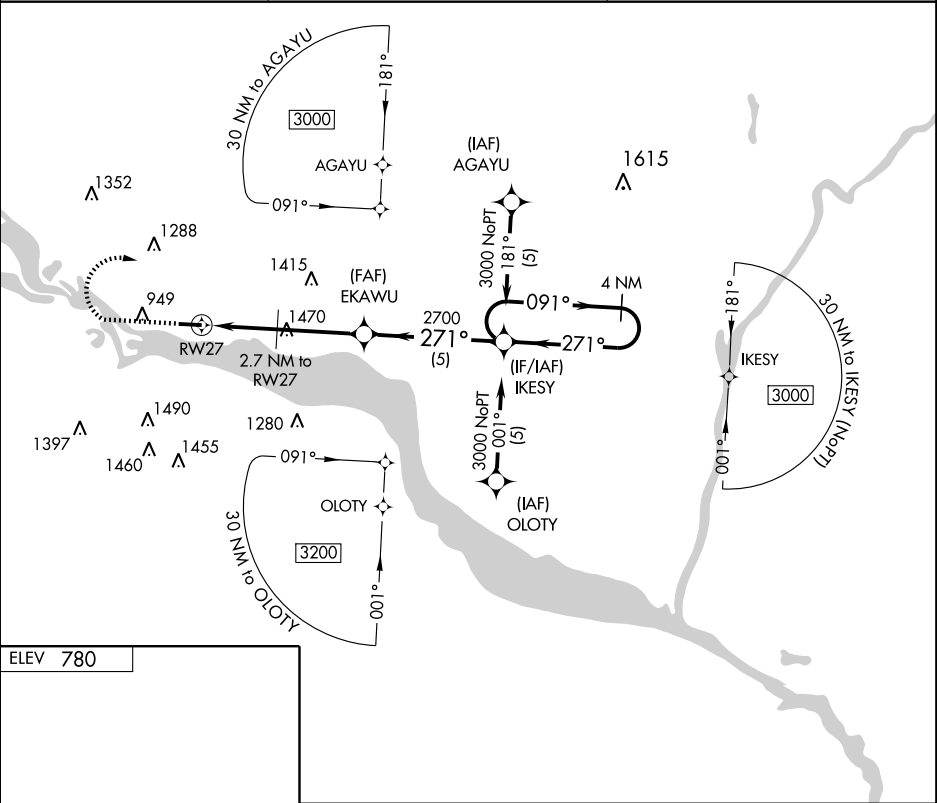
ELEV 780			
			
CATEGORY	A	B	D
GLS PA DA	NA		
LNNAV/VNAV DA	1160-¾ 382 (400-¾)		
LNNAV MDA	1260-½ 482 (500-½)	1260-¾ 482 (500-¾)	NA
CIRCLING	1480-1¼ 700 (700-1¼)	1520-1¼ 740 (800-1¼)	NA
			
REIL Rwy 27 1 HIRL Rwy 9-27 1			

APP CRS 271°	Rwy Idg 5010 TDZE 778 Apt Elev 780
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RNAV (GPS) RWY 27
RED WING RGNL (RGK)

<div><div>▼</div><div>NA</div></div> <div>GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.</div>	MISSED APPROACH: Climb to 2100, then climbing right turn to 3000 direct IKESY WP and hold.
--	--

AWOS-3 119.25	MINNEAPOLIS APP CON 121.2 357.4	UNICOM 123.05 (CTAF) 0
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	2100	3000	IKESY	
	↑	↪	✧	
			2.7 NM to RW27	EKAUW
			2.1 NM to RW27	IKESY
			3.14° TCH 45	1720
			2.1 NM	0.6 NM
			3.1 NM	5 NM
				4 NM Holding Pattern
				091° → 3000
				← 271°
CATEGORY	A	B	C	D
LNAV MDA	1520-1	742 (800-1)	1520-2¼ 742 (800-2¼)	NA
CIRCLING	1520-1	740 (800-1)	1540-2¼ 760 (800-2¼)	NA

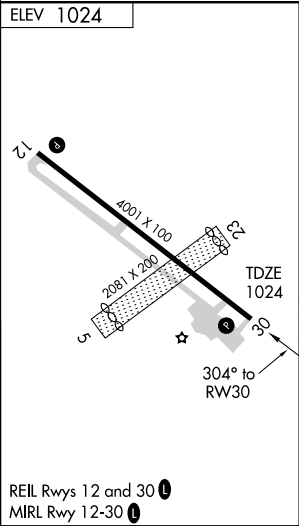
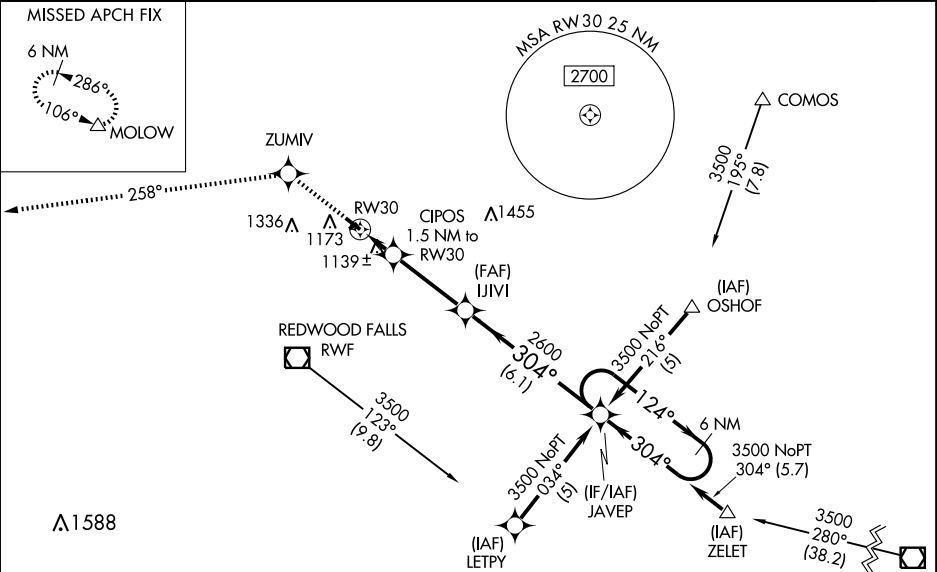
WAAS CH 86610 W30A	APP CRS 304°	Rwy Idg TDZE Apt Elev	4001 1024 1024
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RNAV (GPS) RWY 30
REDWOOD FALLS MUNI (RWF)

⚠ DME/DME RNP -0.3 NA. Visibility reduction by helicopters NA.
⚠ For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F).
Baro-VNAV NA when using Olivia Rgnl altimeter setting.
When local altimeter setting not received, use Olivia Rgnl altimeter setting and increase all DA/MDA 40 feet and LNAV Cat C visibility ¼ mile.

MISSED APPROACH: Climb to 3800 direct ZUMIV and via 258° track to MOLOW and hold.

ASOS 126.575	MINNEAPOLIS CENTER 127.1 290.2	UNICOM 123.0 (CTAF) 0
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Procedure NA for arrivals at MKT VOR/DME via V250 northeast bound.				
3800	ZUMIV	258° track	MOLOW	VGSI and RNAV glidepath not coincident.
*LNAV only		CIPOS 1.5 NM to RW30	IJIVI	6 NM Holding Pattern
RW30		1540*	2600	GS 3.00° TCH 45
1.5 NM		3.3 NM	6.1 NM	
CATEGORY	A	B	C	D
LPV DA	1304-1 280 (300-1)			
LNAV/VNAV DA	1440-1½ 416 (500-1½)			
LNAV MDA	1400-1 376 (400-1)			1400-1¼ 376 (400-1¼)
CIRCLING	1480-1 456 (500-1)	1580-1 556 (600-1)	1580-1½ 556 (600-1½)	1700-2¼ 676 (700-2¼)

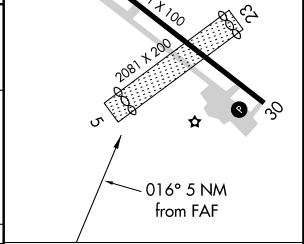
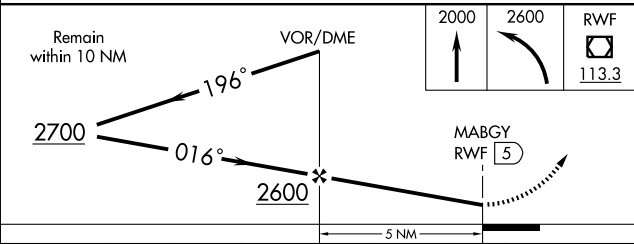
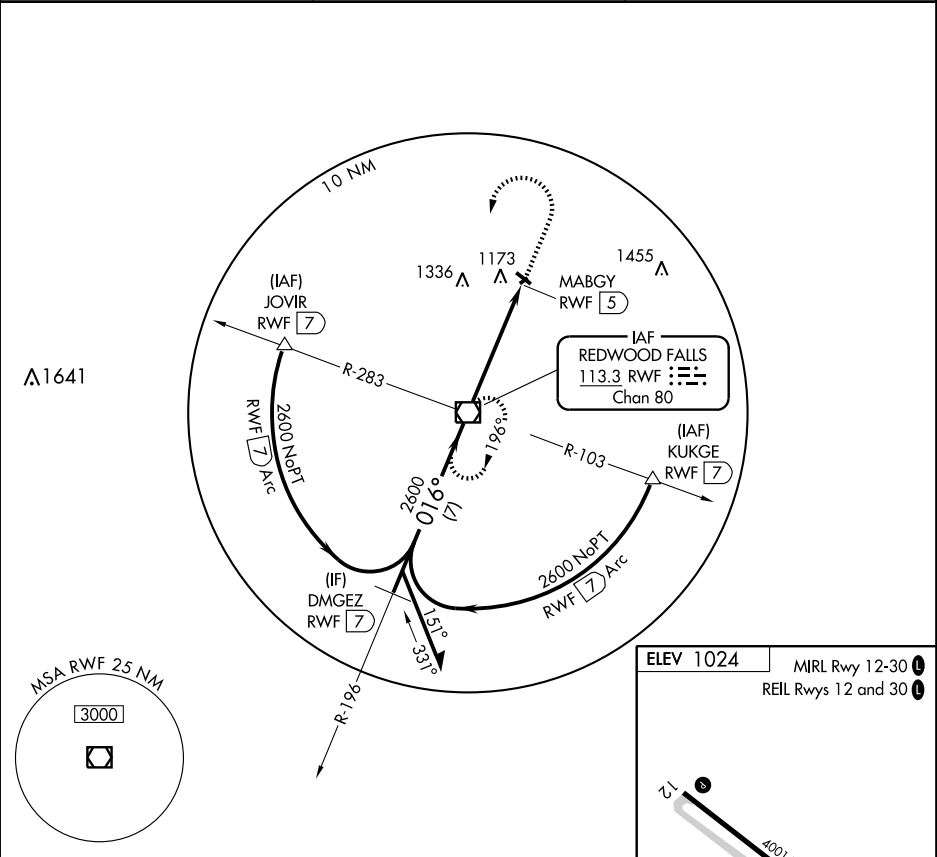
VOR/DME RWF	APP CRS	Rwy Idg	N/A
113.3	016°	TDZE	N/A
Chan 80		Apt Elev	1024

VOR-A

REDWOOD FALLS MUNI (RWF)

<p>⚠ When local altimeter setting not received, use Olivia Rgnl altimeter setting and increase all MDA 40 feet.</p>	<p>MISSED APPROACH: Climb to 2000 then climbing left turn to 2600 direct RWF VOR/DME and hold.</p>
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ASOS 126.575	MINNEAPOLIS CENTER 127.1 290.2	UNICOM 123.0 (CTAF) 0
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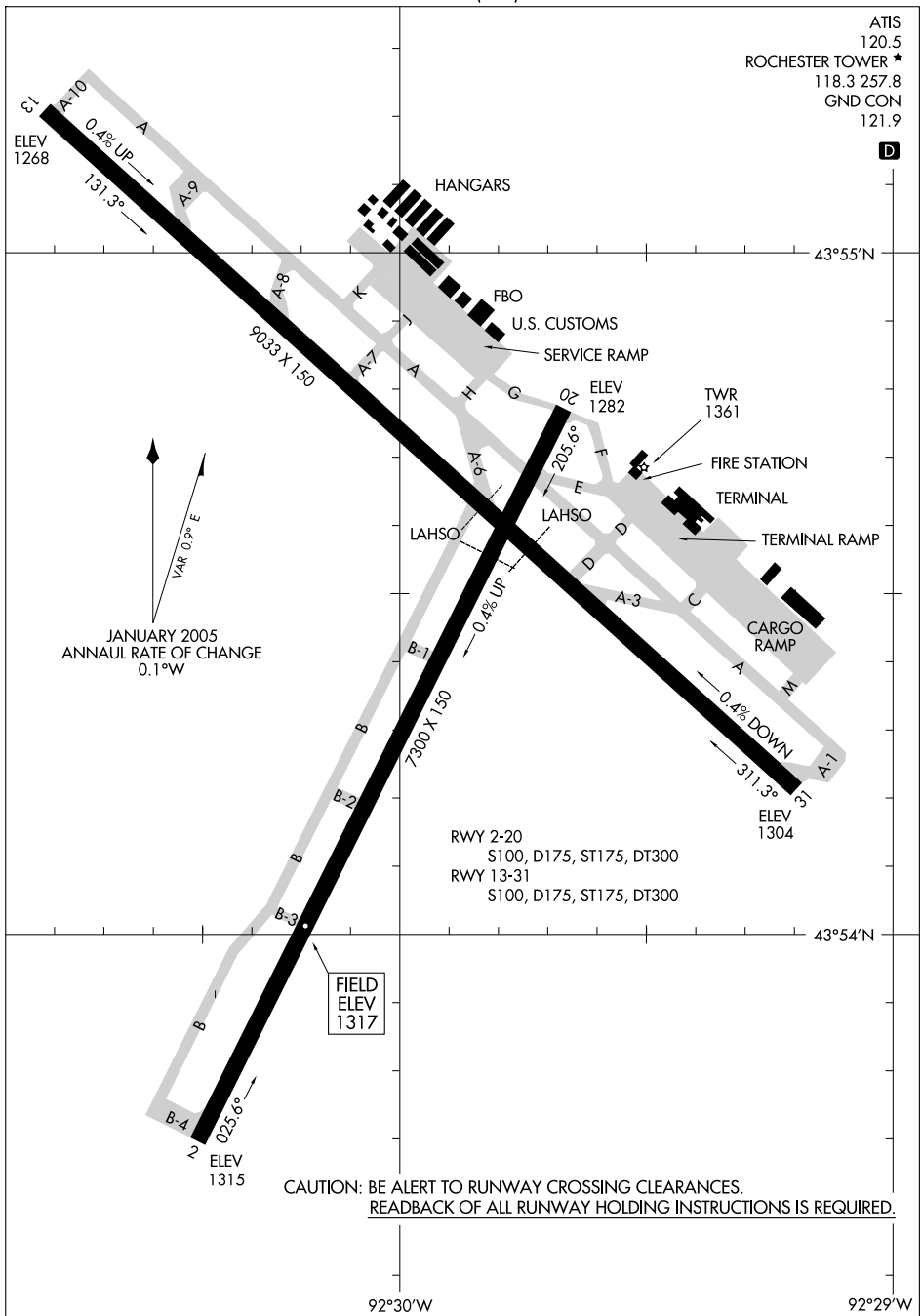


CATEGORY	A	B	C	D	FAF to MAP 5 NM					
CIRCLING	1540-1 516 (600-1)	1580-1 556 (600-1)	1580-1½ 556 (600-1½)	1700-2¼ 676 (700-2¼)	Knots	60	90	120	150	180
					Min:Sec	5:00	3:20	2:30	2:00	1:40

AIRPORT DIAGRAM

AL-5041 (FAA)

ROCHESTER INTL (RST)
ROCHESTER, MINNESOTA



NC-1, 17 DEC 2009 to 14 JAN 2010

LOC I-RST	APP CRS	Rwy Idg	9033
<u>108.5</u>	311°	TDZE	1304
		Apt Elev	1317

COPTER ILS or LOC RWY 31
ROCHESTER INTL (RST)

T
A
ASR

For inoperative MALSR, increase visibility to RVR 2400.



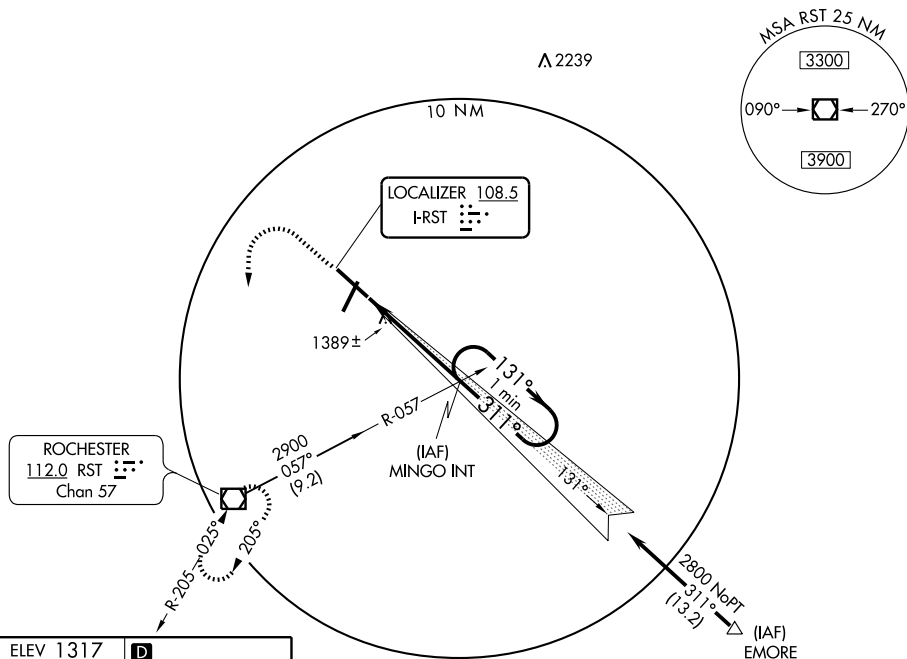
MISSED APPROACH: Climb to 2000 then climbing left turn to 3000 direct RST VOR/DME and hold.

ATIS
120.5

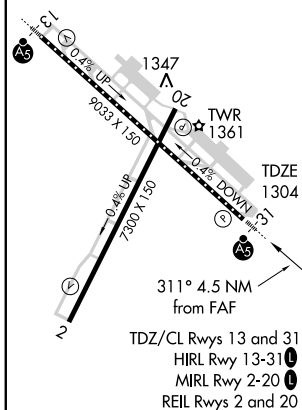
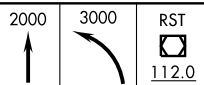
ROCHESTER APP CON★
119.8 251.125

ROCHESTER TOWER★
118.3 (CTAF) **L** 257.8

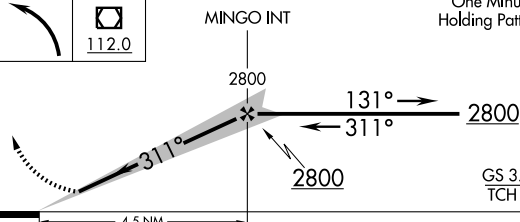
GND CON
121,9

UNICOM
122.95

ELEV 1317

 $\Lambda 2549^{\pm}$ 

One Minute Holding Pattern



GS 3.00°
TCH 50

ID/CL Rwy's 13 and 31						CATEGORY		COPTER		B		C		D	
HJRL Rwy 13-31 ①						S-ILS 31		1504/16 200 (200-¼)		NA					
MIRL Rwy 2-20 ①															
REIL Rwy's 2 and 20						S-LOC 31		1660/16 356 (400-¼)		NA					
FAF to MAP 4.5 NM															
Knots	45	60	75	90	105										
Min:Sec	6:00	4:30	3:36	3:00	2:34	CIRCLING		NA							

MALSR

MISSED APPROACH: Climb to 2000 then climbing right turn to 3000 direct RST VOR/DME and hold.

(IAF) CORDY
 RST 22.8

3000 NoPT
 131° (7.7)

10 NM

(IF) KIBYE INT
 2600
 131° (6.9)

311°

1 min

(IAF) ELJE OM/INT
 1389±

R-360

R-332

R-339

R-260

3000 NoPT
 RST 16 Arc

(IAF) ZOJET
 RST 16

ROCHESTER
112.0 RST
 Chan 57

LOCALIZER 109.1
 I-MNK

ALTERNATE MISSED APPR FIX
 112.0 RST
 076°
 Chan 57
 DIANY
 117.8 ODI
 330°
 Chan 126
 16.6 UKN
 260°
 Chan 113

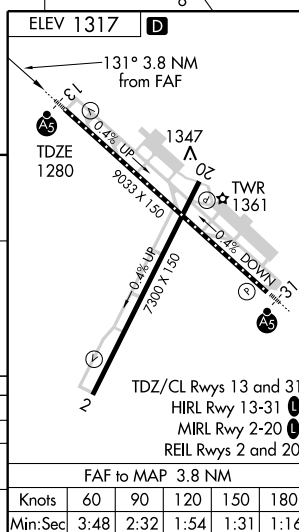
ELEV 1317
 D

131° 3.8 NM
 from FAF

1347

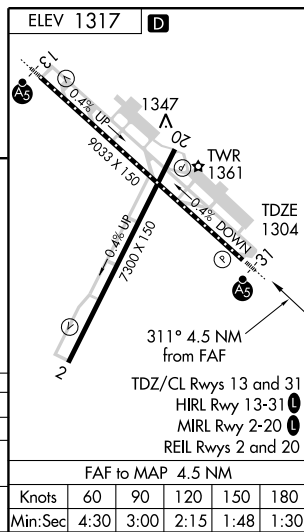
MSA RST 25 NM
 3300
 090°
 270°
 3900
 A2239

NC-1. 17 DEC 2009 to 14 JAN 2010



ILS or LOC RWY 31
ROCHESTER INTL (RST)

MISSED APPROACH: Climb to 2000 then climbing left turn to 3000 direct RST VOR/DME and hold.

UNICOM
122.95

RNAV (GPS) RWY 2
ROCHESTER INTL (RST)

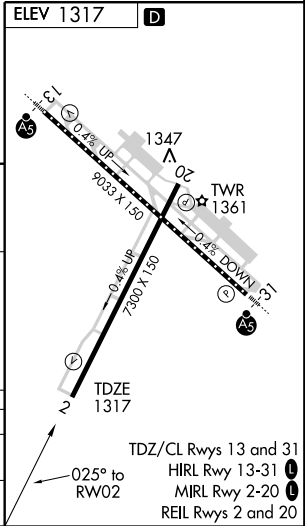
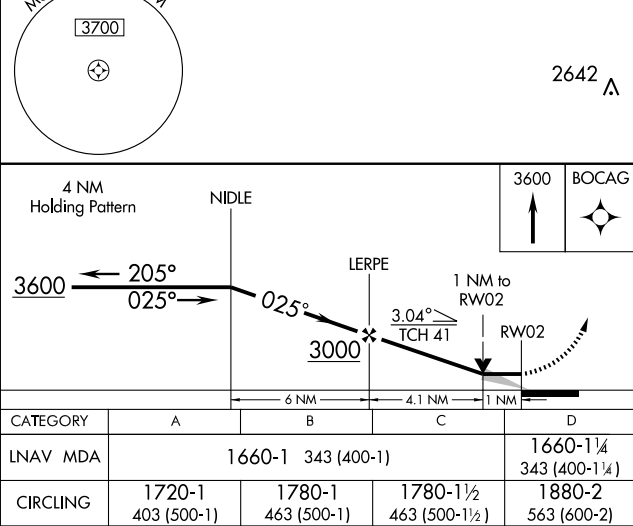
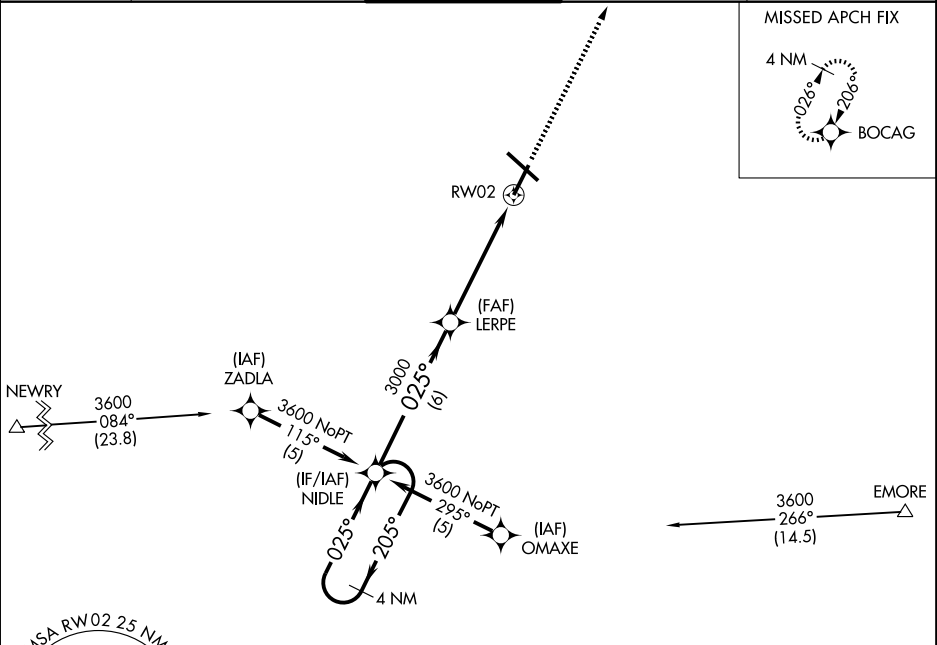
APP CRS	Rwy Idg	7300
025°	TDZE	1317
	Apt Elev	1317

NA GPS or RNP- 0.3 required. DME/DME RNP- 0.3 NA.

ASR

MISSED APPROACH: Climb to 3600 direct BOCAG WP and hold.

ATIS 120.5	ROCHESTER APP CON ★ 119.8 251.125	ROCHESTER TOWER ★ 118.3 (CTAF) 257.8	GND CON 121.9	UNICOM 122.95
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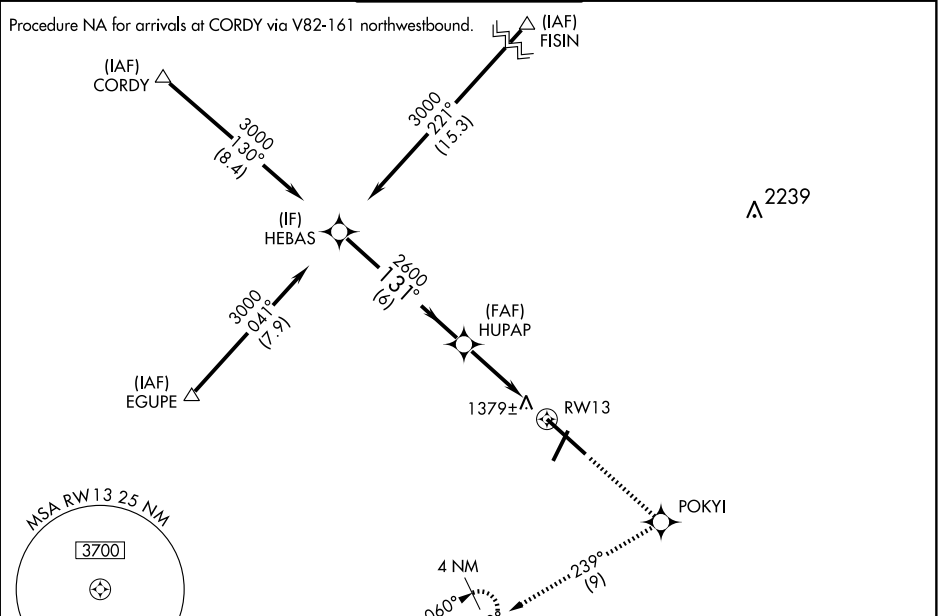
WAAS CH 90202 W13A	APP CRS 131°	Rwy Idg TDZE 1280 Apt Elev 1317
--	------------------------	---

RNAV (GPS) RWY 13

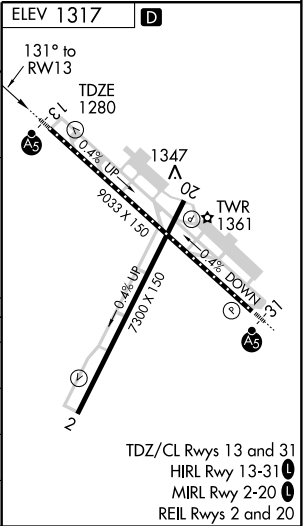
ROCHESTER INTL (RST)

ASR DME/DME RNP-0.3 NA. For uncompensated Baro-VNAV system, LNAV/VNAV NA below -17°C (2°F) or above 45°C (114°F). For inoperative MALSR increase LPV all Cats visibility to RVR 5000 and LNAV Cat D visibility to RVR 6000.	MALSR 	MISSED APPROACH: Climb to 2900 direct POKYI and via 239° track to RST VOR/DME and hold.
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ATIS 120.5	ROCHESTER APP CON* 119.8 251.125	ROCHESTER TOWER* 118.3 (CTAF) 0 257.8	GND CON 121.9	UNICOM 122.95
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Procedure Turn NA	HEBAS	HUPAP	2900	POKYI	239° track	RST
3000	131°	2600	6 NM	3 NM	1 NM	
GS 3.00° TCH 53						
CATEGORY	A	B	C	D		
LPV DA		1530/24	250 (300-½)			
LNAV/VNAV DA		1679/50	399 (400-1)			
LNAV MDA		1640/24	360 (400-½)		1640/50 360 (400-1)	
CIRCLING	1720-1½ 403 (500-1½)	1780-1½ 463 (500-1½)			1880-2 563 (600-2)	



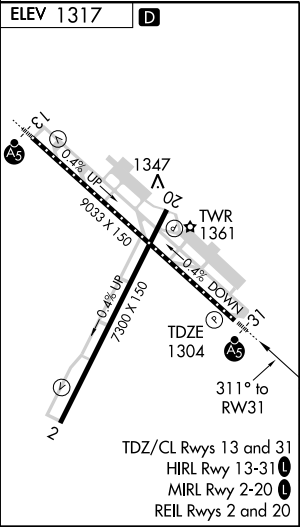
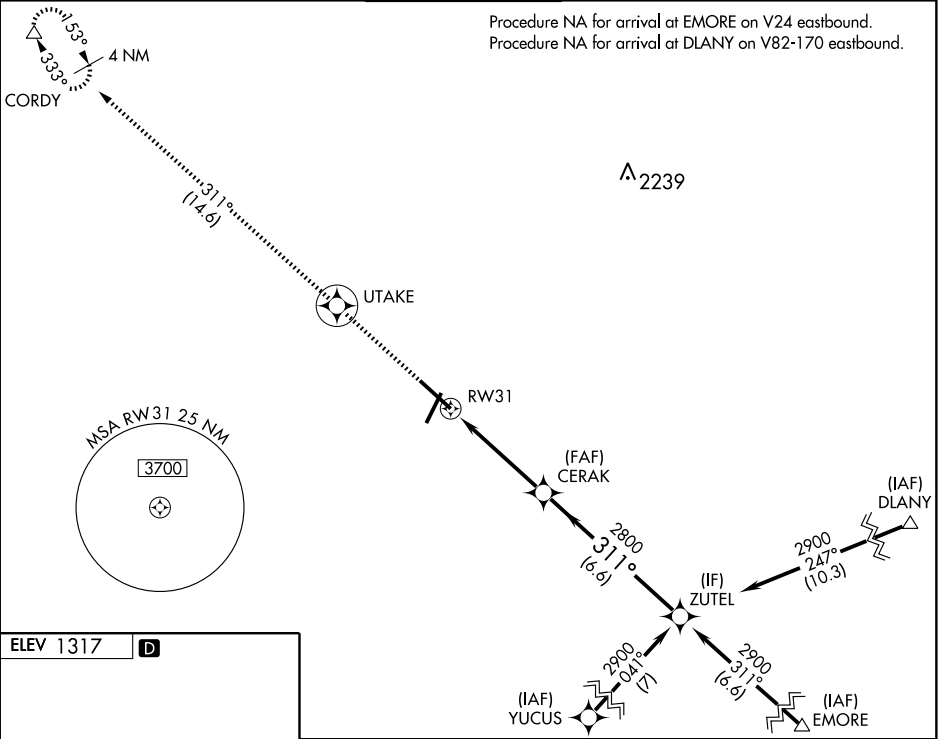
APP CRS	Rwy Idg	9033
311°	TDZE	1304
	Apt Elev	1317

RNAV (GPS) RWY 31

ROCHESTER INTL (RST)

NA ASR	Baro-VNAV NA below -17°C (2°F). GPS or RNP-0.3 required. DME/DME RNP-0.3 NA. For inoperative MALSR increase LNAV/VNAV Cat. D visibility to RVR 5000 and increase LNAV Cat. D visibility to RVR 6000.	MALSR 	MISSED APPROACH: Climb to 3000 direct UTAKE WP and via 311° track to CORDY WP and hold.
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ATIS 120.5	ROCHESTER APP CON* 119.8 251.125	ROCHESTER TOWER* 118.3 (CTAF) 0 257.8	GND CON 121.9	UNICOM 122.95
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3000	UTAKE	CORDY	ZUTEL	Procedure Turn NA
* LNAV only	* 1 NM to RWY 31			
	1 NM	3.5 NM	6.6 NM	
CATEGORY	A	B	C	D
GLS PA DA	NA			
LNAV/VNAV MDA	1620/24 316 (400-½)			1620/40 316 (400-¾)
LNAV MDA	1680/24 376 (400-½)			1680/50 376 (400-1)
CIRCLING	1720-1 403 (500-1)	1780-1 463 (500-1)	1780-1½ 463 (500-1½)	1880-2 563 (600-2)

VOR/DME RST 112.0 Chan 57	APP CRS 204°	Rwy Idg 7300 TDZE 1304 Apt Elev 1317
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VOR/DME RWY 20
ROCHESTER INTL (RST)

T
ASR

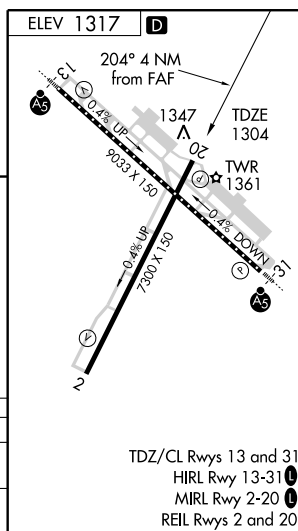
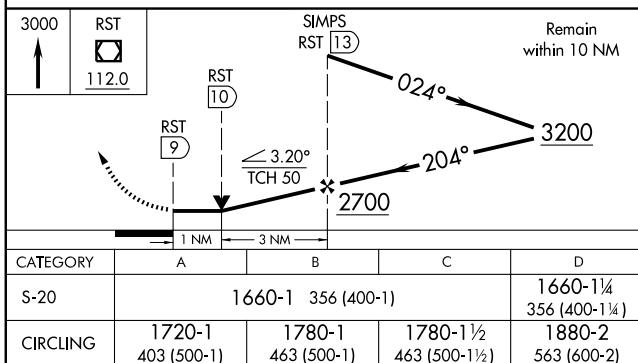
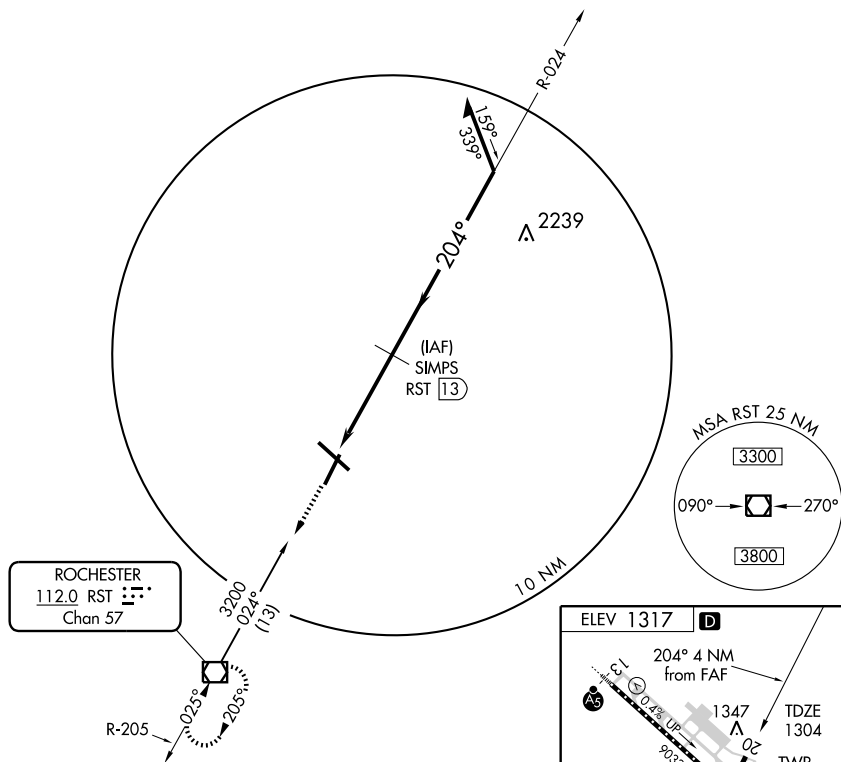
MISSED APPROACH: Climb to 3000 direct RST VOR/DME and hold.

ATIS
120.5

ROCHESTER APP CON★
119.8 251.125

ROCHESTER TOWER★
118.3 (CTAF) **L** 257.8

GND CON
121.9

UNICOM
122.95

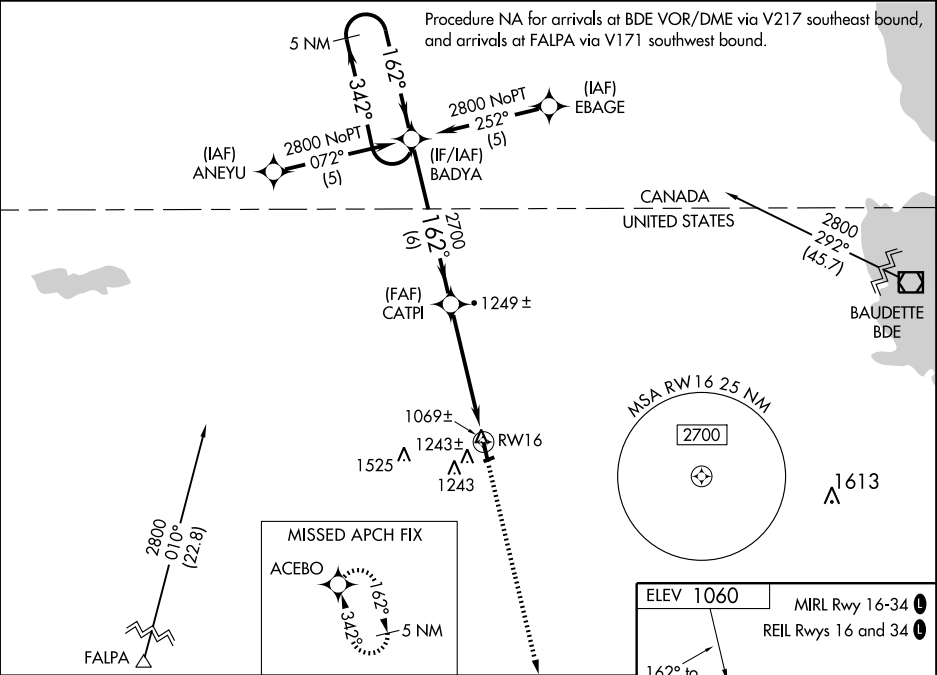
WAAS CH 56304 W16A	APP CRS 162°	Rwy Idg TDZE Apt Elev	4401 1055 1060
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RNAV (GPS) RWY 16
ROSEAU MUNI/RUDY BILLBERG FIELD (ROX)

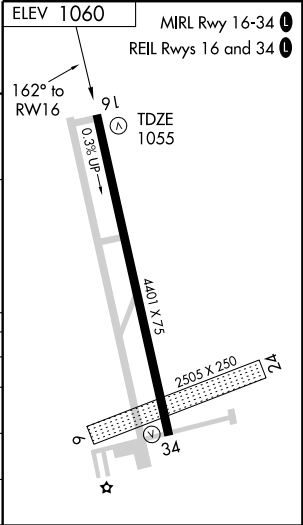
⚠ If local altimeter setting not received, use Warroad altimeter setting and increase all DAs 36 feet/MDAs 40 feet.
⚠ VDP NA when using Warroad altimeter setting.
⚠ Baro-VNAV NA when using Warroad altimeter setting.
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). DME/DME RNP- 0.3 NA.

MISSED APPROACH: Climb to 2800 direct ACEBO and hold.

AWOS-3 108.8	MINNEAPOLIS CENTER 134.75 251.1	UNICOM 122.8 (CTAF) 0
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5 NM Holding Pattern		BADYA	VGSI and RNAV glidepath not coincident.		2800	ACEBO
2800		← 342°	162° →	162°	2700	*1.3 NM to RW16
GS 3.00° TCH 40		6 NM		3.7 NM	1.3	*LNAV only
CATEGORY	A	B	C	D		
LPV DA	1305-1		250 (300-1)			
LNAV/ VNAV DA	1403-1¼		348 (400-1¼)			
LNAV MDA	1500-1	445 (500-1)	1500-1¼ 445 (500-1¼)	1500-1½ 445 (500-1½)		
CIRCLING	1600-1	540 (600-1)	1600-1½ 540 (600-1½)	1640-2 580 (600-2)		



WAAS
CH 99404
W34A

APP CRS
342°

Rwy Idg	4401
TDZE	1060
Apt Elev	1060

RNAV (GPS) RWY 34

ROSEAU MUNI/RUDY BILLBERG FIELD (ROX)

T If local altimeter setting not received, use Warroad altimeter setting and increase all DAs 36 feet/MDAs 40 feet.

A VDP NA when using Warroad altimeter setting.

W Baro-VNAV NA when using Warroad altimeter setting.


For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F).

Visibility reduction by helicopters NA. DME/DME RNP- 0.3 NA.

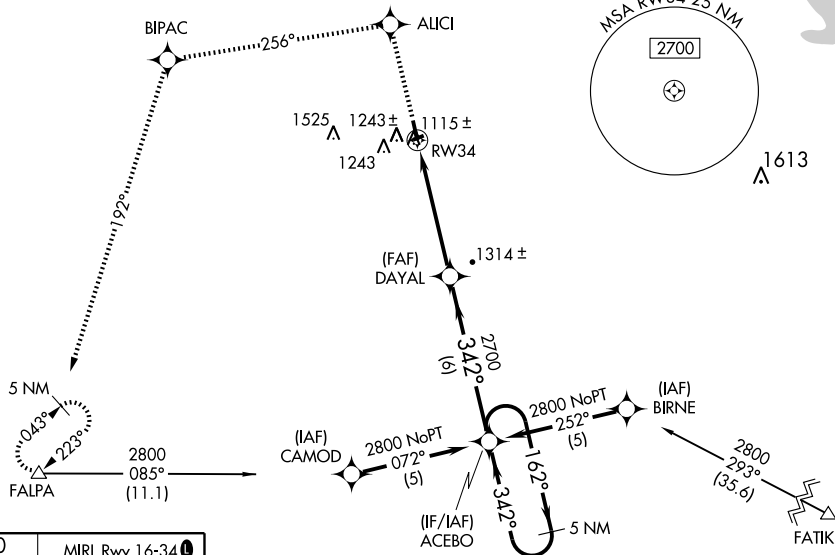
MISSED APPROACH: Climb to 2900 direct ALICI and via 256° track to BIPAC and 192° track to FALPA and hold.

AWOS-3
108.8

MINNEAPOLIS CENTER
134.75 251.1

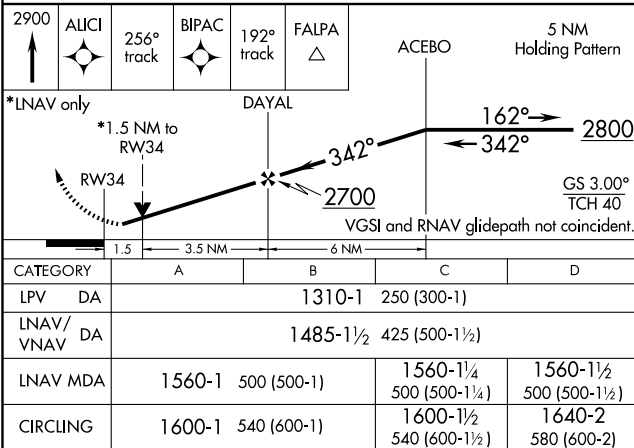
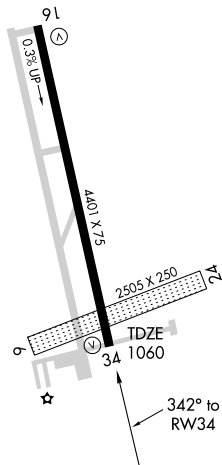
UNICOM
122.8 (CTAF) 

Procedure NA for arrivals at FALPA via V171 southwest bound.



NC-1. 17 DEC 2009 to 14 JAN 2010

ELEV 1060

MIRI Rwy 16-34 **L**REIL Rwys 16 and 34 **L**

VOR/DME ROX 108.8 Chan 25	APP CRS 156°	Rwy Idg TDZE Apt Elev 4401 1055 1060
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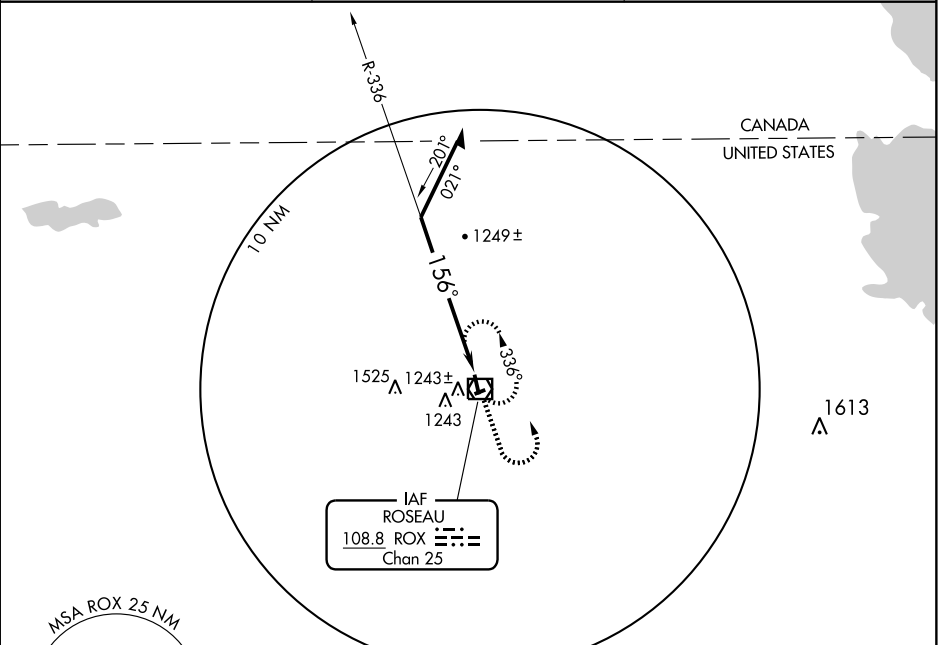
VOR RWY 16
ROSEAU MUNI/RUDY BILLBERG FIELD (ROX)

▼ If local altimeter setting not received, use Warroad altimeter setting and increase all MDAs 40 feet.

▲ NA VDP NA when using Warroad altimeter setting.

MISSED APPROACH: Climb to 3000 then left turn direct ROX VOR/DME and hold.

AWOS-3 108.8	MINNEAPOLIS CENTER 134.75 251.1	UNICOM 122.8 (CTAF) 0
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MSA ROX 25 NM

2700

Remain within 10 NM

VOR/DME

3000

ROX 108.8

2700

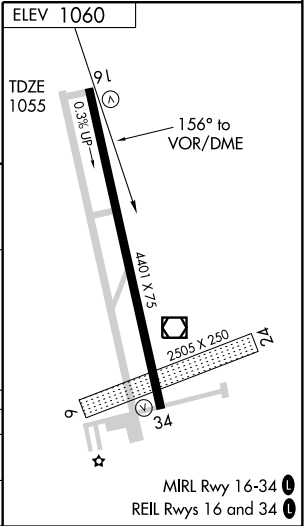
336°

156°

ROX 2.1

1.5 NM

CATEGORY	A	B	C	D
S-16	1560-1	505 (500-1)	1560-1½	505 (500-1½)
CIRCLING	1600-1	540 (600-1)	1600-1½ 540 (600-1½)	1640-2 580 (600-2)



VOR RWY 34

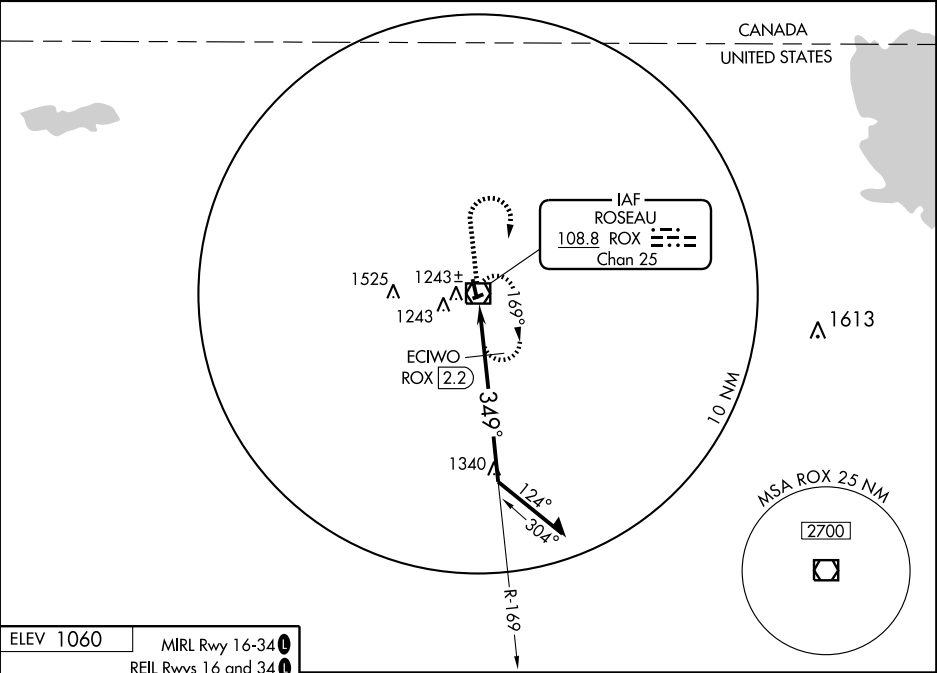
ROSEAU MUNI/RUDY BILLBERG FIELD (ROX)

VOR/DME ROX 108.8 Chan 25	APP CRS 349°	Rwy Idg TDZE Apt Elev	4401 1060 1060
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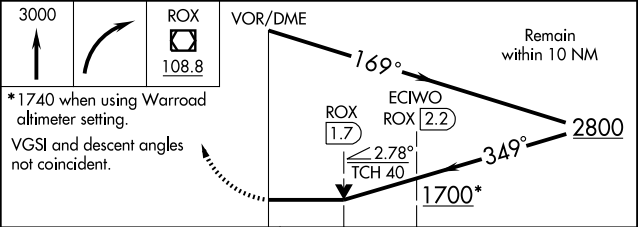
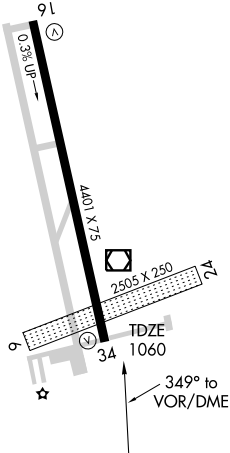
▼ If local altimeter setting not received, use Warroad altimeter setting and increase all MDAs 40 feet.
▲ NA VDP NA when using Warroad altimeter setting.
Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 3000 then right turn direct ROX VOR/DME and hold.

AWOS-3 108.8	MINNEAPOLIS CENTER 134.75 251.1	UNICOM 122.8 (CTAF)
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ELEV 1060	MIRL Rwy 16-34
	REIL Rwys 16 and 34

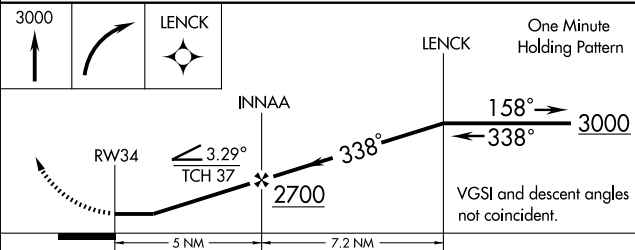
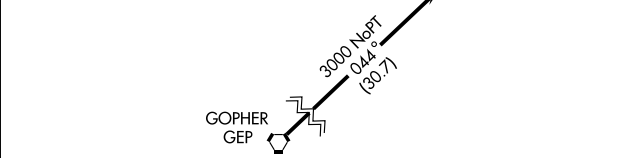
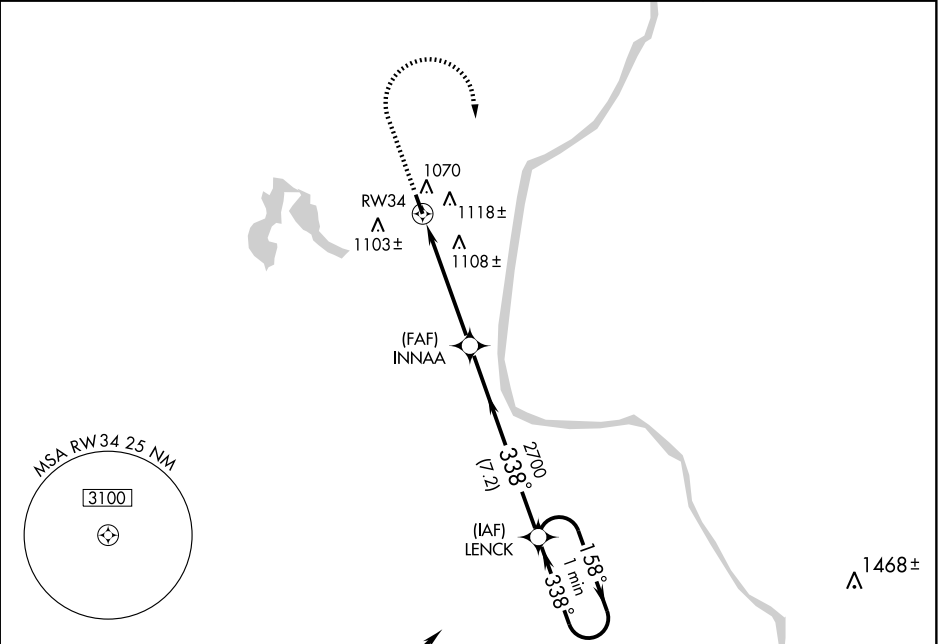


CATEGORY	A	B	C	D
S-34	1700-1	640 (700-1)	1700-1¾ 640 (700-1¾)	1700-2 640 (700-2)
CIRCLING	1700-1	640 (700-1)	1700-1¾ 640 (700-1¾)	1700-2 640 (700-2)
ECIWO FIX MINIMUMS				
S-34	1560-1	500 (500-1)	1560-1¼ 500 (500-1¼)	1560-1½ 500 (500-1½)
CIRCLING	1600-1	540 (600-1)	1600-1½ 540 (600-1½)	1640-2 580 (600-2)

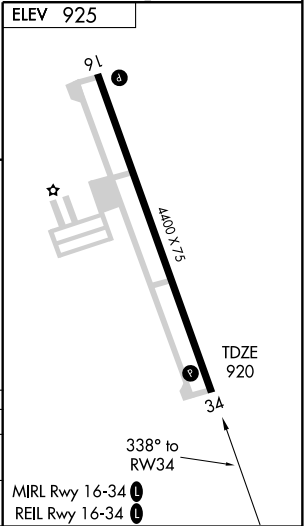
GPS RWY 34
RUSH CITY RGNL (ROS)

APP CRS 338°	Rwy Idg TDZE Apt Elev	4400 920 925
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NA		MISSED APPROACH: Climb to 3000, then right turn direct LENCK WP and hold.	
AWOS-3 282	MINNEAPOLIS CENTER 121.05 397.9	GCO 121.725	CTAF 122.9



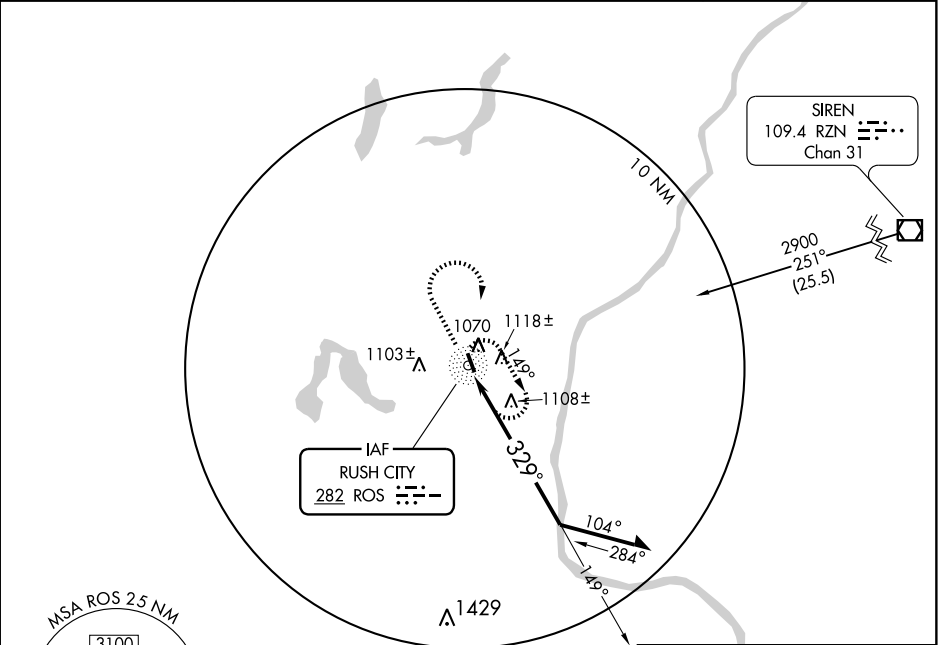
CATEGORY	A	B	C	D
S-34	1320-1	400 (400-1)		1320-1¼ 400 (400-1¼)
CIRCLING	1420-1	495 (500-1)	1420-1½ 495 (500-1½)	1480-2 555 (600-2)



NDB ROS 282	APP CRS 329°	Rwy Idg TDZE Apt Elev	4400 920 925
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NDB RWY 34
RUSH CITY RGNL (ROS)

NA		MISSED APPROACH: Climb to 2900, then right turn direct ROS NDB and hold.	
AWOS-3 282	MINNEAPOLIS CENTER 121.05 397.9	GCO 121.725	CTAF 122.9



ELEV 925

91
4000x75
TDZE 920
34
329° to NDB

2900	↑	ROS 282		
NDB				
Remain within 10 NM				
CATEGORY	A	B	C	D
S-34	1480-1	560 (600-1)	1480-1½ 560 (600-1½)	1480-1¾ 560 (600-1¾)
CIRCLING	1480-1	555 (600-1)	1480-1½ 555 (600-1½)	1480-2 555 (600-2)

MIRL Rwy 16-34
REIL Rwy 16-34

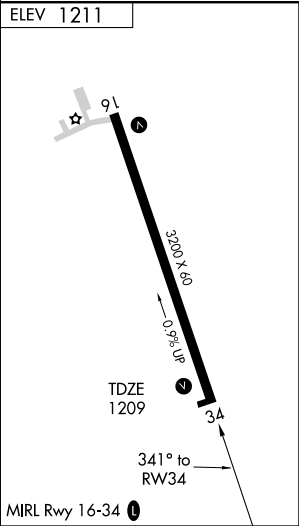
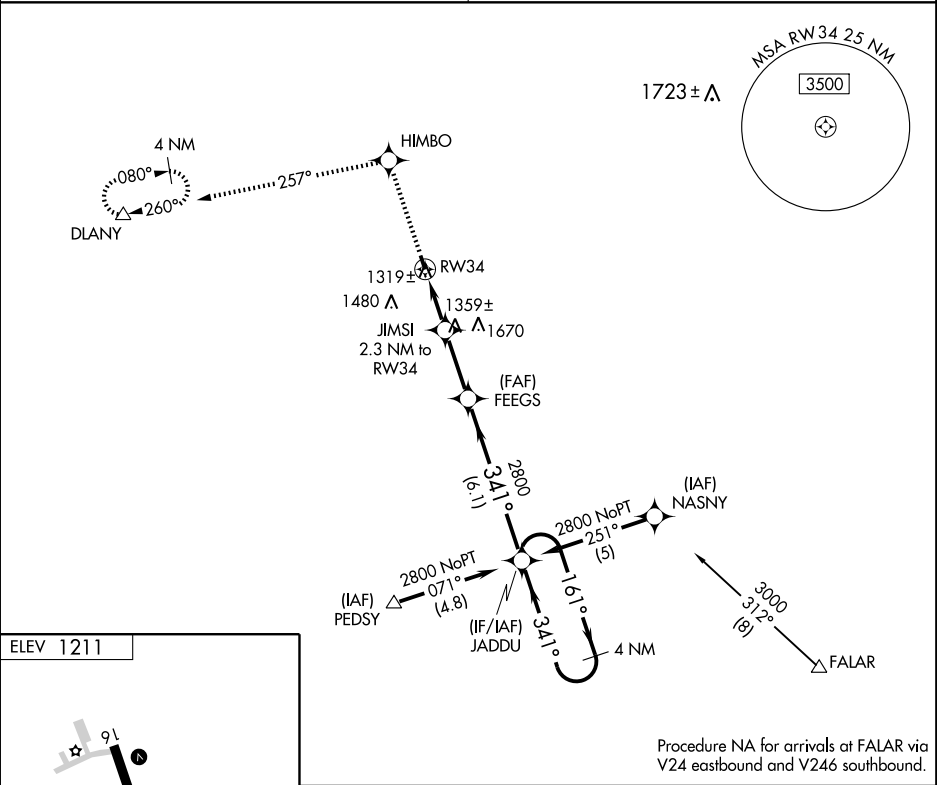
APP CRS	Rwy Idg	3200
341°	TDZE	1209
	Apt Elev	1211

RNAV (GPS) RWY 34
RUSHFORD MUNI (55Y)

NA DME/DME RNP-0.3 NA
Visibility reduction by helicopters NA.
Use Preston altimeter setting, when not received use Winona altimeter setting and increase all MDA 80 feet.

MISSED APPROACH: Climb to 3000 direct HIMBO and via 257° track to DLANY and hold.


ROCHESTER APP CON ★ 119.8 251.125	CTAF 122.9
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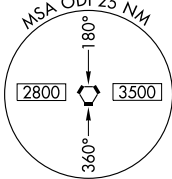
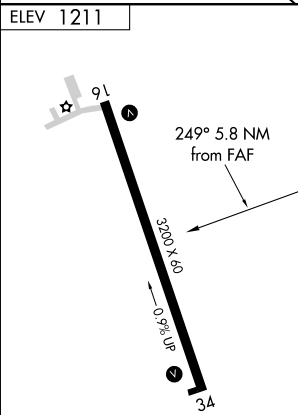
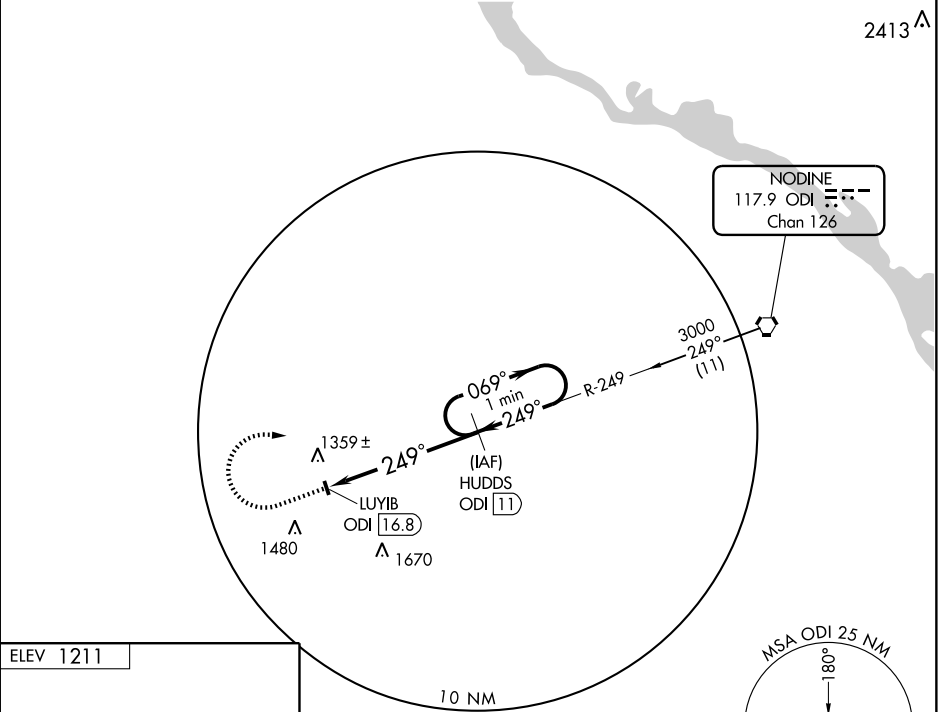
	3000 ↑	HIMBO ✧	257° track	DLANY △	FEEGS	JADDU	4 NM Holding Pattern
	2.3 NM				2.6 NM	6.1 NM	
CATEGORY	A		B		C		D
LNAV MDA	1620-1 411 (500-1)		1620-1 411 (500-1 1/4)		1720-1 509 (600-1 1/2)		NA
CIRCLING	1720-1 509 (600-1)		1720-1 509 (600-1 1/2)		1720-1 509 (600-1 1/2)		NA

VORTAC ODI 117.9 Chan 126	APP CRS 249°	Rwy Idg TDZE Apt Elev 1211	N/A N/A
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VOR/DME-A
RUSHFORD MUNI (55Y)

 Use Preston altimeter setting, when not received use Winona altimeter setting and increase all MDA 80 feet.	MISSED APPROACH: Climb to 2000, then climbing right turn to 3000 via ODI VORTAC R-249 to HUDDS/ODI 11 DME and hold.
---	---

ROCHESTER APP CON ★ 119.8 251.125	CTAF 122.9 0
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<div>2000</div> <div>↑</div>		<div>3000</div> <div><div>ODI</div><div>R-249</div></div>	<div>HUDDS</div> <div>ODI</div> <div>11</div>	<div>HUDDS</div> <div>ODI</div> <div>11</div>		<div>One Minute</div> <div>Holding Pattern</div>	
<div><div><div><div><div><div></div><div>LUYIB</div><div>ODI</div><div>16.8</div></div><div><div>249°</div></div></div><div><div>5.8 NM</div></div><div><div>069°</div><div>→</div></div><div><div>←</div><div>249°</div></div><div><div>3000</div></div></div></div></div>							
CATEGORY	A		B		C		D
CIRCLING	1720-1		509 (600-1)		1720-1½ 509 (600-1½)		NA

APP CRS	Rwy Idg	3300
327°	TDZE	1234
	Apt Elev	1244

GPS RWY 32

SAUK CENTRE MUNI (D39)

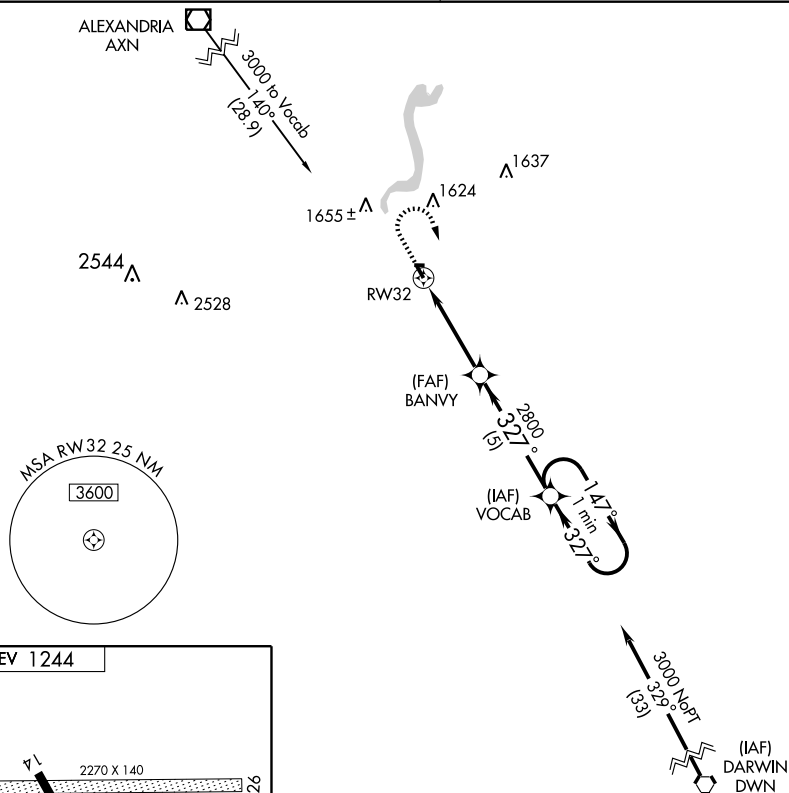


Use Alexandria Chandler Field altimeter setting.

MISSED APPROACH: Climb to 2500 then climbing right turn to 3000 direct VOCAB WP and hold.

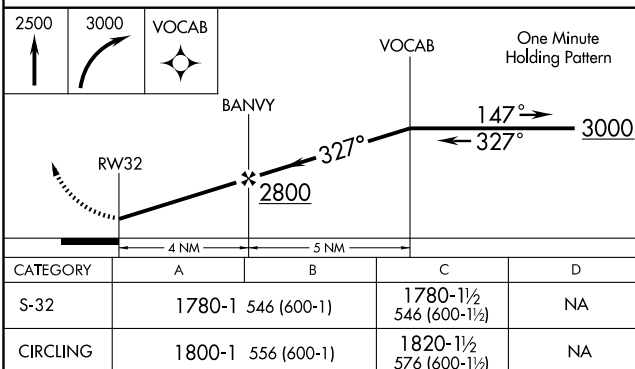
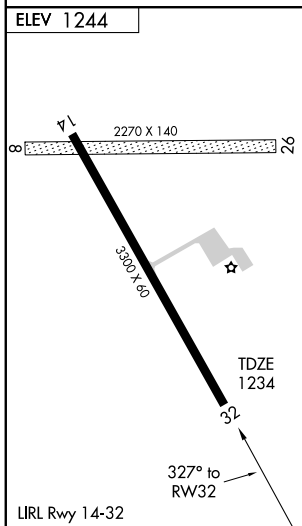
MINNEAPOLIS CENTER
126.1 269.2

CTAF
122.9



NC-1. 17 DEC 2009 to 14 JAN 2010

ELEV 1244

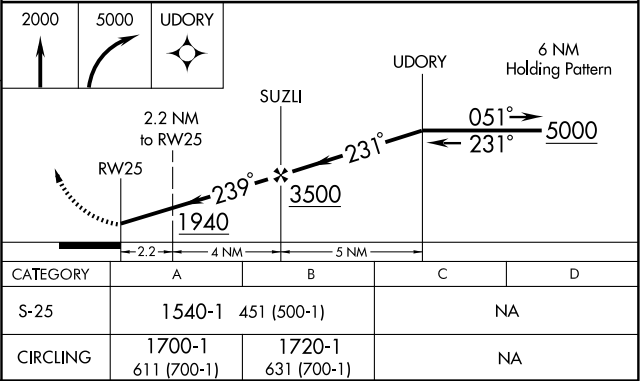
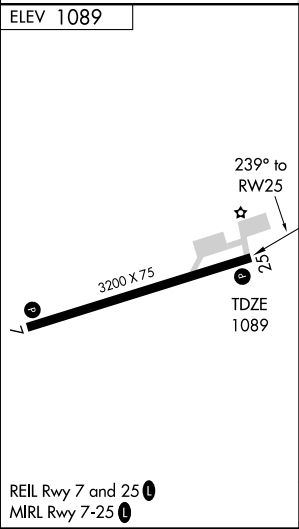
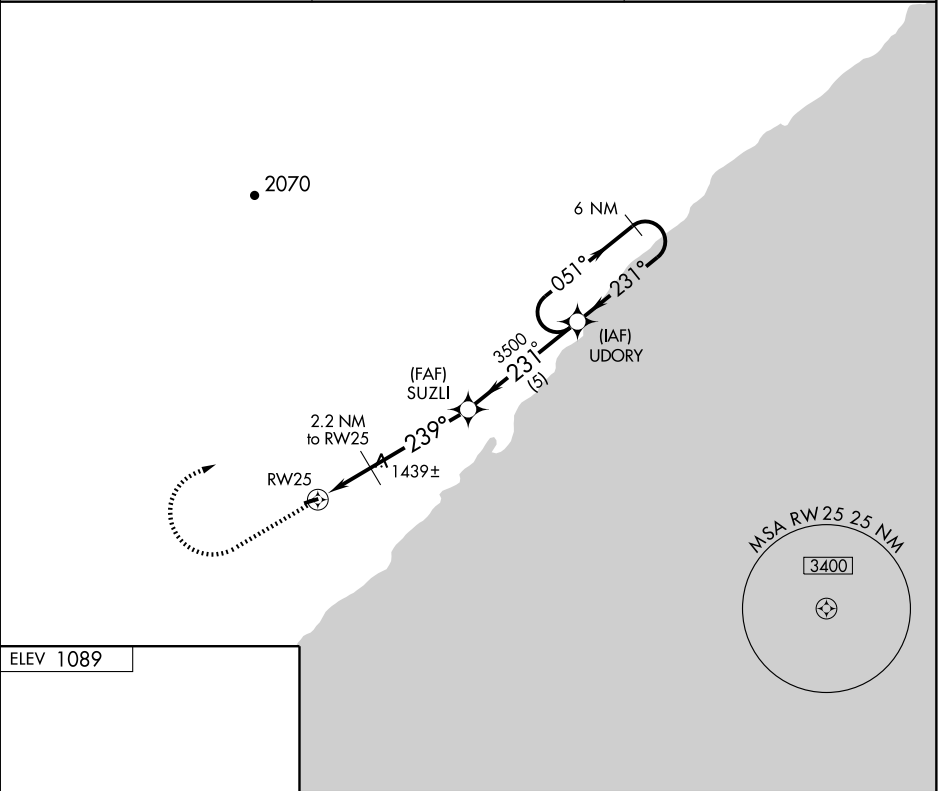


▼

▲ NA

MISSED APPROACH: Climb to 2000 then climbing right turn to 5000 direct UDORY WP and hold.


AWOS-3 350	MINNEAPOLIS CENTER 134.55 290.5	CTAF 122.9 0
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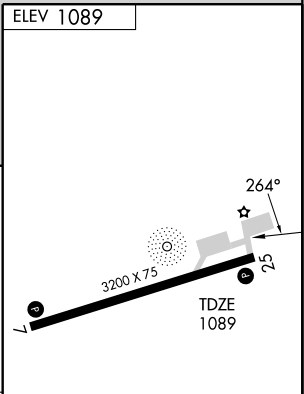
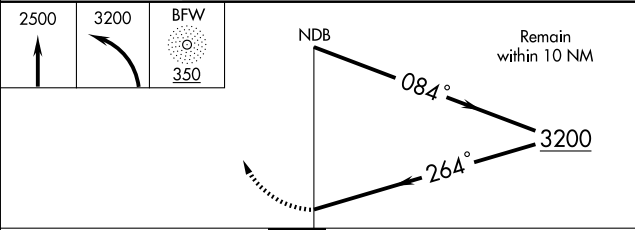
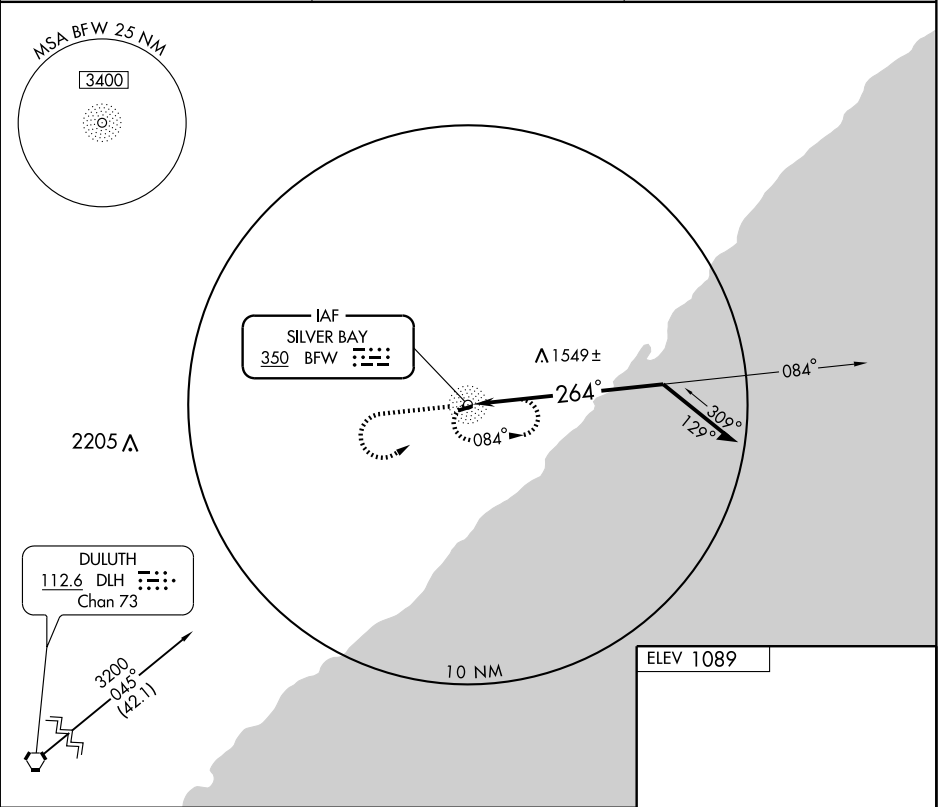
NC-1. 17 DEC 2009 to 14 JAN 2010

NDB BFW	APP CRS	Rwy Idg	3200
350	264°	TDZE	1089
		Apt Elev	1089



NDB RWY 25
SILVER BAY MUNI (BFW)

 NA	MISSED APPROACH: Climb to 2500 then climbing left turn to 3200 direct BFW NDB and hold.
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AWOS-3 350	MINNEAPOLIS CENTER 134.55 290.5	CTAF 122.9 
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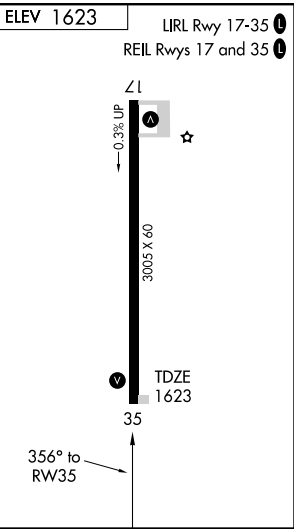
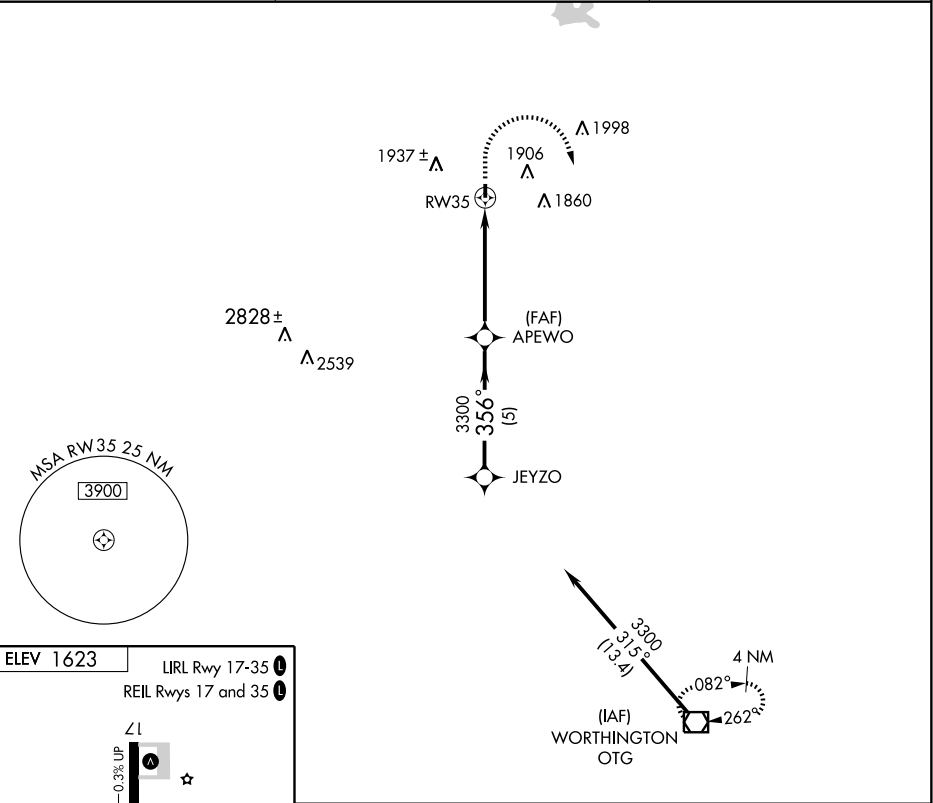
CATEGORY	A	B	C	D
S-25	1900-1 811 (900-1)	1900-1¼ 811 (900-1¼)	NA	
CIRCLING	1900-1 811 (900-1)	1900-1¼ 811 (900-1¼)	NA	

REIL Rwy 7 and 25 
MIRL Rwy 7-25 

APP CRS	Rwy Idg	3005
356°	TDZE	1623
	Apt Elev	1623

▲ NA	Use Worthington altimeter setting.	MISSED APPROACH: Climb to 3300, then right turn direct OTG VOR/DME and hold.
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AWOS-3 118.55	MINNEAPOLIS CENTER 132.05 317.4	CTAF 122.9
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	JEYZO	APEWO	3300	OTG
Procedure Turn NA				
	3300	3300	3300	
	356°	356°	356°	
	5 NM	5 NM		
CATEGORY	A	B	C	D
S-35	2080-1	457 (500-1)	NA	
CIRCLING	2180-1 557 (600-1)	2220-1 597 (600-1)	NA	

LOC/DME I-SGS 108.35 Chan 20 (Y)	APP CRS 339°	Rwy Idg TDZE 819 Apt Elev 820
--	------------------------	---

LOC RWY 34

SOUTH ST. PAUL MUNI-RICHARD E. FLEMING FIELD (SGS)

NA When local altimeter setting not received, use Minneapolis-St. Paul Int'l/Wold-Chamberlain altimeter setting and increase all MDAs 40 feet; and all visibilities $\frac{1}{4}$ mile.

MISSED APPROACH: Climbing right turn to 3000 via heading 100° and GEP VORTAC R-125 to PRESS Int'/FGT 21.7 DME and hold.

AWOS-3
119.425

MINNEAPOLIS APP CON
121.2 335.5

CLNC DEL
118.2

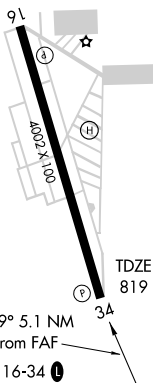
UNICOM
122.7 (CTAF) **0**

117.3 GEP
Chan 120

LOCALIZER **108.35**
I-SGS
Chan 20 (Y)

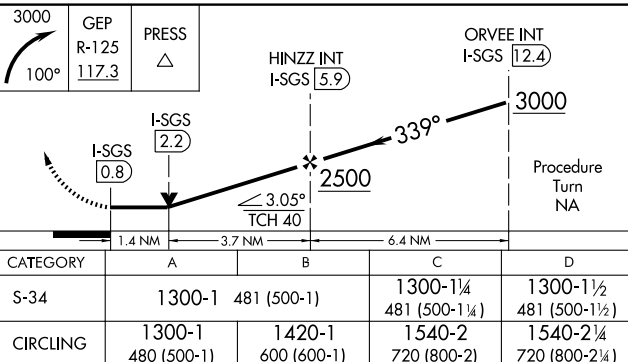
IAF
FARMINGTON
115.7 FGT
Chan 104

ELEV 820



Procedure NA for arrival on FGT VORTAC via airway radials 011 CW 118.

Procedure NA for arrival at PRESS via V2-97 southeast bound.

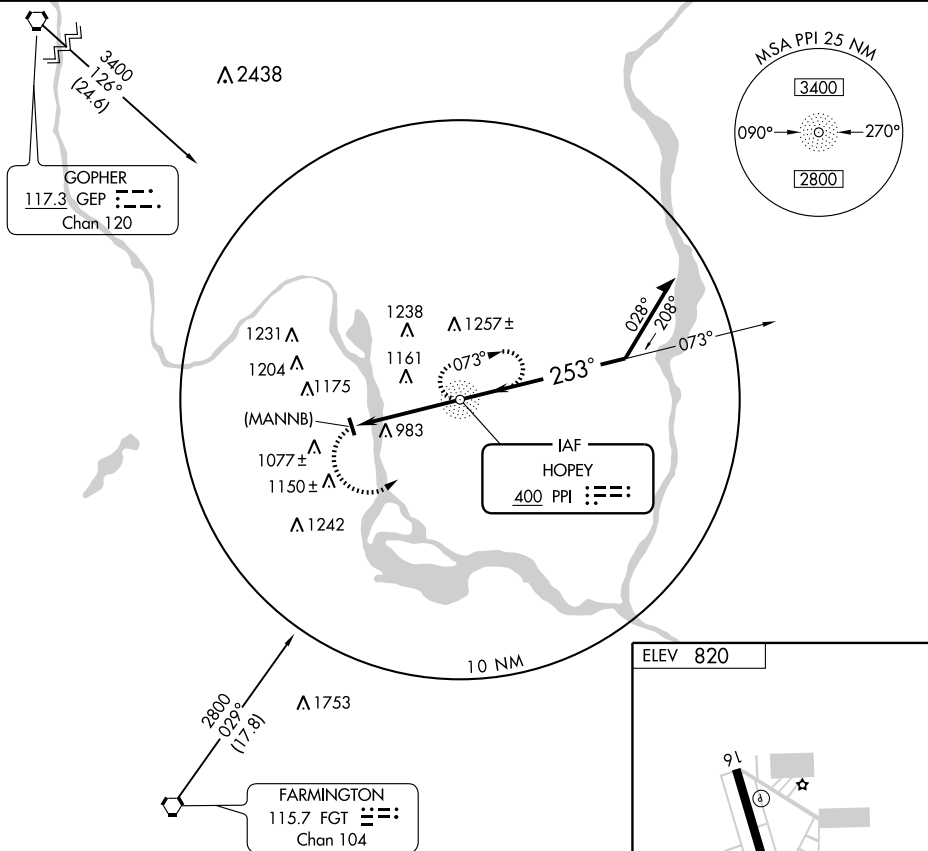


NDB PPI 400	APP CRS 253°	Rwy Idg TDZE Apt Elev	N/A N/A 820
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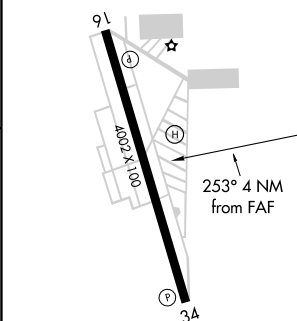
NDB or GPS-B

SOUTH ST. PAUL MUNI-RICHARD E. FLEMING FIELD (SGS)

MISSED APPROACH: Climbing left turn to 2600 direct PPI NDB and hold.

AWOS-3
119.425MINNEAPOLIS APP CON
121.2 335.5CLNC DEL
118.2UNICOM
122.7 (CTAF) 0

ELEV 820



MIRL Rwy 16-34 0

FAF to MAP 4 NM

CATEGORY	A	B	C	D	Knots				
CIRCLING	1480-1	660 (700-1)	1480-1½ 660 (700-1½)	1480-2 660 (700-2)	60	90	120	150	180
					Min:Sec	4:00	2:40	2:00	1:36

APP CRS
339°

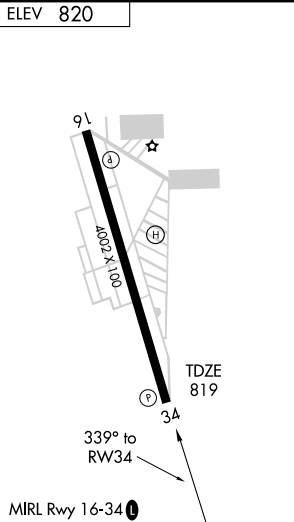
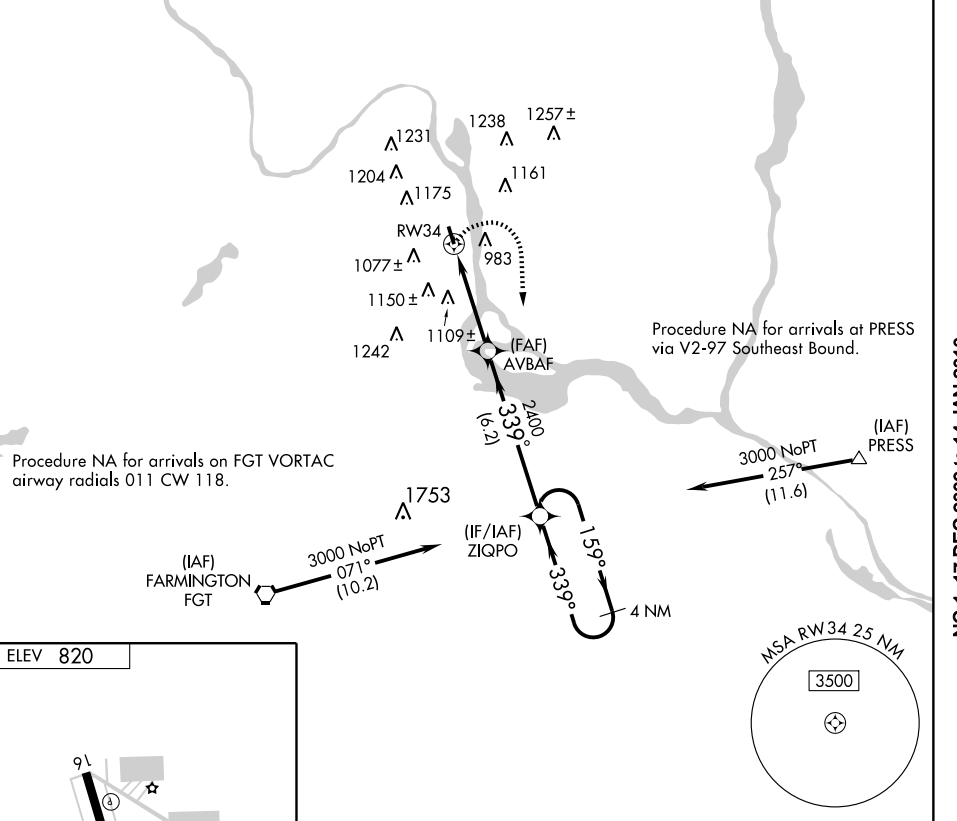
Rwy Idg
TDZE
819
Apt Elev
820







SOUTH ST. PAUL MUNI-RICHARD E. FLEMING FIELD (SGS)

▲ DME/DME RNP-0.3 NA. When local altimeter setting not received, use Minneapolis-St Paul Intl altimeter setting and increase all MDA 40 feet and increase Circling Cats. C and D visibility ¼ mile. VDP NA with Minneapolis-St Paul Intl altimeter setting.

MISSED APPROACH: Climbing right turn to 3000 direct ZIQPO and hold.

AWOS-3 119.425	MINNEAPOLIS APP CON 121.2 335.5	CLNC DEL 118.2	UNICOM 122.7 (CTAF) 1
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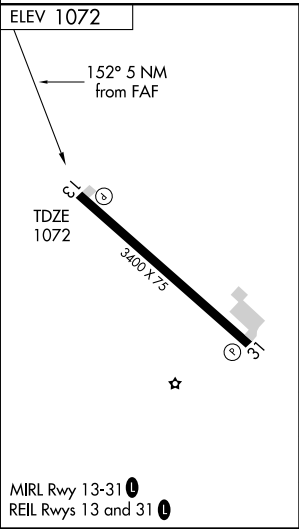
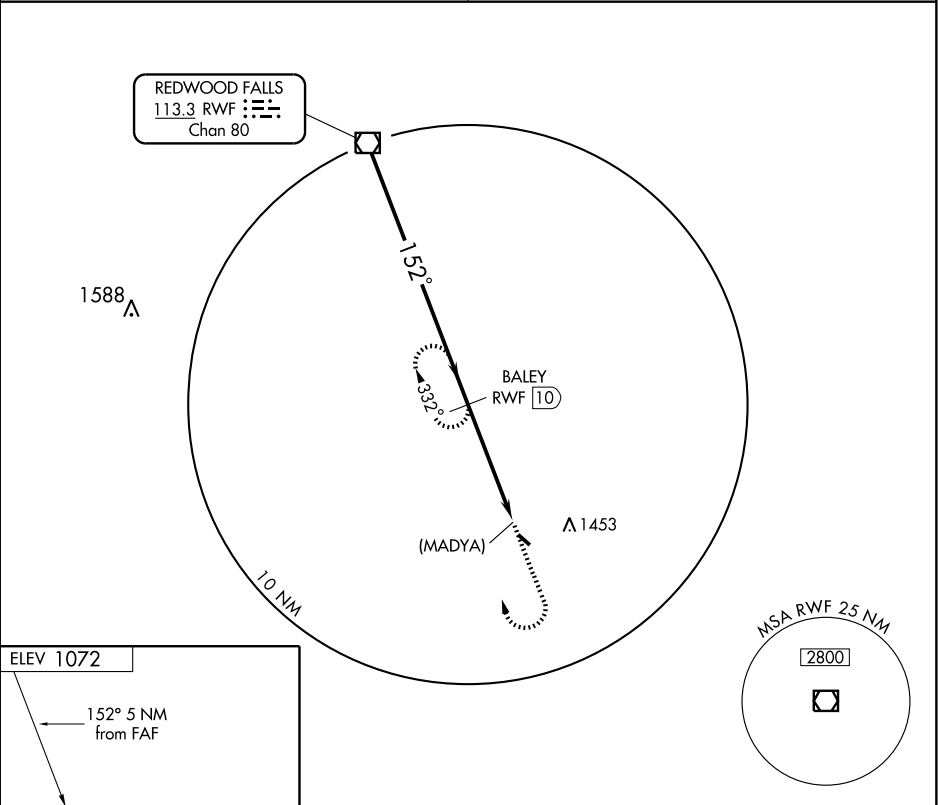
<div>3000</div> <div></div>	<div>ZIQPO</div> <div></div>	<div>4 NM Holding Pattern</div>			
		<div><div>159° →</div><div>← 339°</div><div>3000</div></div>			
		<div><div>1.5 NM to RW34</div><div></div><div><div>RW34</div><div></div></div></div>			
		<div><div>AVBAF</div><div></div><div><div>2400</div><div></div></div></div>			
		<div><div>3.04°</div><div>TCH 40</div></div>			
<div>1.5</div>		<div>3.3 NM</div>		<div>6.2 NM</div>	
CATEGORY	A	B	C	D	
LNAV MDA	1340-1	521 (600-1)	1340-1½ 521 (600-1½)	1340-1¾ 521 (600-1¾)	
CIRCLING	1400-1	580 (600-1)	1540-2 720 (800-2)	1540-2¼ 720 (800-2¼)	

VOR/DME RWF	APP CRS	Rwy Idg	3400
113.3	152°	TDZE	1072
Chan 80		Apt Elev	1072

VOR/DME or GPS RWY 13

SPRINGFIELD MUNI (D42)

NA Use Redwood Falls, MN altimeter setting.	MISSED APPROACH: Climb to 2000 then climbing right turn to 2600 via RWF R-152 to BAILEY 10 DME and hold.
MINNEAPOLIS CENTER 127.1 290.2	UNICOM 122.8 (CTAF) 1



	VOR/DME	BAILEY RWF 10	2000	2600	BAILEY RWF 10
	2600	152°	2600	RWF 13.3	(MADYA) RWF 14.5
Procedure Turn NA	10 NM	3.3 NM	1.2 NM	0.5	
CATEGORY	A	B	C	D	
S-13	1620-1	548 (600-1)	1620-1½ 548 (600-1½)	NA	
CIRCLING	1620-1 548 (600-1)	1820-1¼ 748 (800-1¼)	1820-2¼ 748 (800-2¼)	NA	

AIRPORT DIAGRAM

AL-5799 (FAA)

ST. CLOUD RGNL (STC)
ST. CLOUD, MINNESOTA

ATIS
119.375
ST. CLOUD TOWER ★
118.25
GND CON
123.75

D

FIELD
ELEV
1031

VAR 2.0° E

JANUARY 2005
ANNUAL RATE OF CHANGE
0.1° W

45°33'N

AIRLINE
TERMINAL

RWY 5-23
S50, D75, ST95
RWY 13-31
S75, D175, ST175, DT280

CONTROL
TOWER
1110

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
REDBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

94°04'W

94°03'W

45°32'N

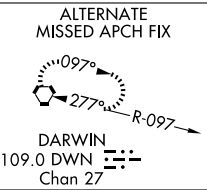
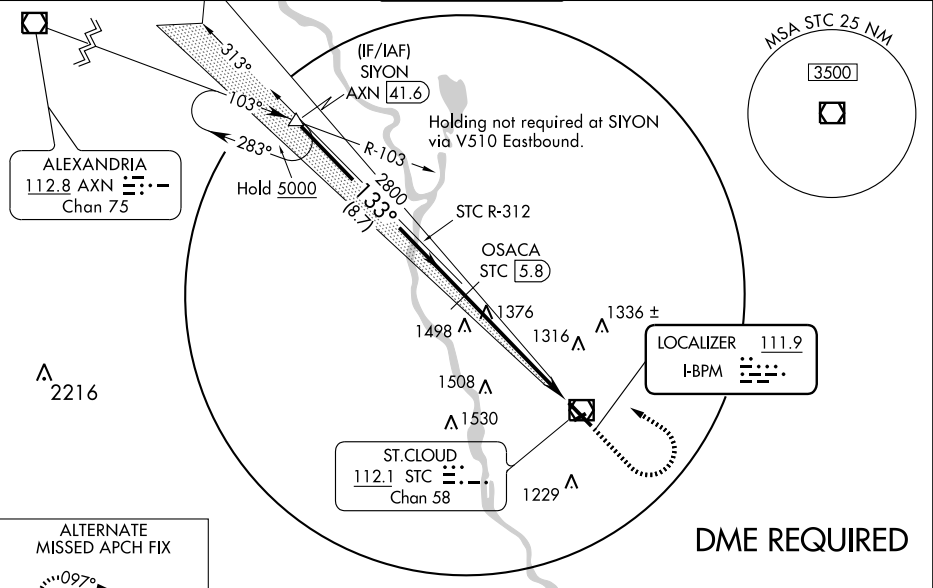
NC-1, 17 DEC 2009 to 14 JAN 2010

LOC I-BPM	APP CRS	Rwy Idg	7000
111.9	133°	TDZE	1031
		Apt Elev	1031

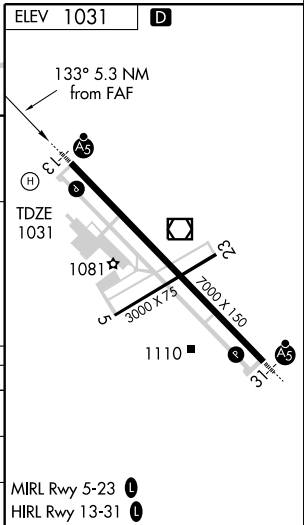
⚠ Circling to Rwy 5-23 NA at night. DME from STC VOR/DME. Simultaneous reception of I-BPM and STC DME required. DME required. When local altimeter setting not received, use Little Falls altimeter setting and increase DA to 1307 and all MDAs 80 feet. Increase S-LOC 13 Cats C/D and Circling Cats C/D visibility ¼ mile. For inoperative MALSR when using Little Falls altimeter setting, increase S-ILS 13 all Cats visibility ½ mile.

MALSR
A5
MISSED APPROACH: Climb to 2500 then climbing left turn to 5000 direct STC VOR/DME and via STC VOR/DME R-312 to SIYON/AXN VOR/DME 41.6 DME and hold.

ATIS	ASOS	MINNEAPOLIS CENTER	ST. CLOUD TOWER ★	GND CON	PRINCETON RADIO	UNICOM
119.375	112.1	121.05 397.9	118.25 (CTAF) 0	123.75	122.5	123.5



Procedure Turn NA	<div>2500 5000</div> <div>STC</div> <div>STC</div> <div>SIYON</div>			
	<div>SIYON</div> <div>AXN 41.6</div> <div>OSACA</div> <div>STC 5.8</div> <div>STC</div> <div>0.5</div>			
	<div>5000</div> <div>133°</div> <div>2800</div> <div>8.7 NM</div> <div>5.3 NM</div>			
	<div>GS 3.00°</div> <div>TCH 49</div>			
CATEGORY	A	B	C	D
S-ILS 13	1231-½ 200 (200-½)			
S-LOC 13	1680-½	649 (700-½)	1680-1¼ 649 (700-1¼)	1680-1½ 649 (700-1½)
CIRCLING	1680-1	649 (700-1)	1680-1¾ 649 (700-1¾)	1680-2 649 (700-2)

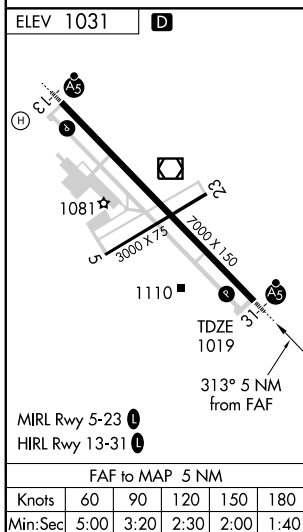


ILS or LOC RWY 31
ST. CLOUD RGNL (STC)

MALSF

MISSED APPROACH: Climb to 3000, then left turn direct HUSSK LOM and hold.

ADF REQUIRED



APP CRS	Rwy Idg	3000
056°	TDZE	1022
	Apt Elev	1031

RNAV (GPS) RWY 5

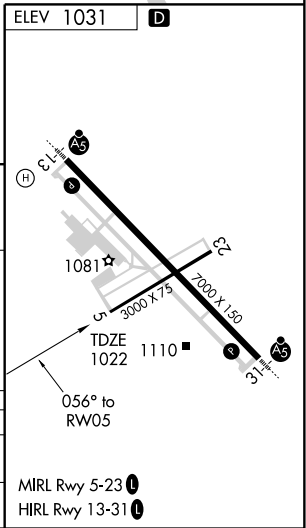
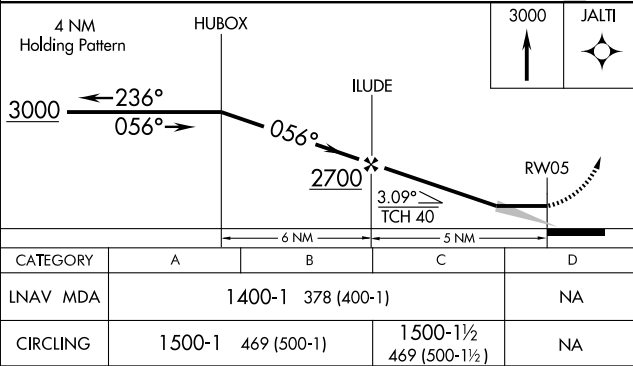
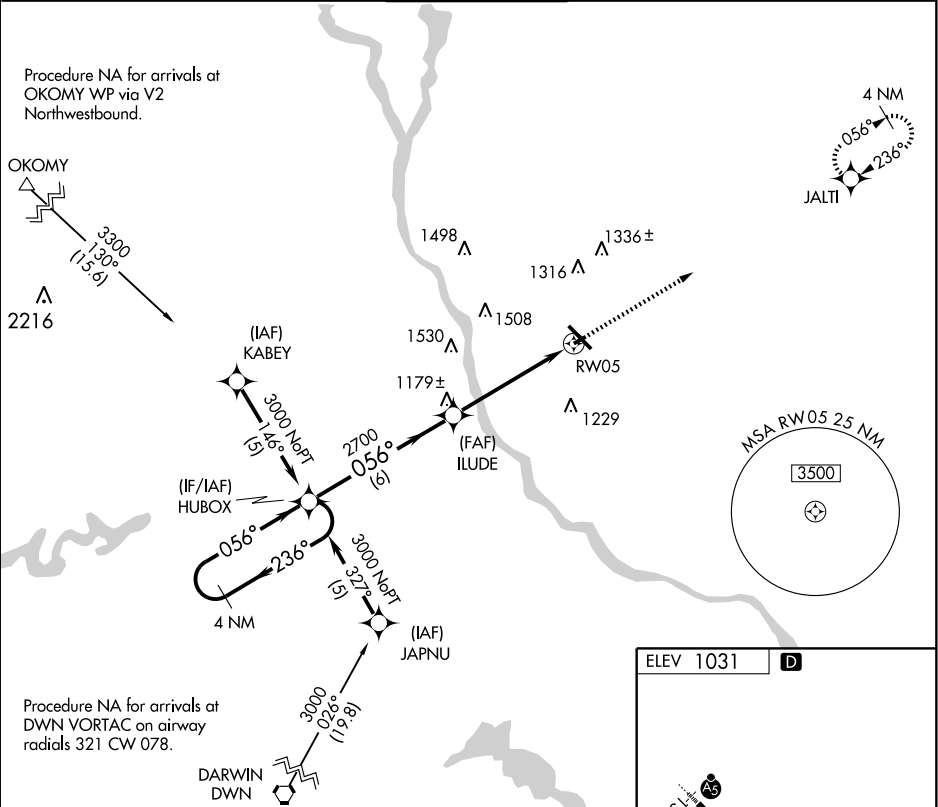
ST. CLOUD RGNL (STC)

▼ When local altimeter setting not received, use Little Falls altimeter setting and increase all MDA 80 feet and LNAV Cat C visibility ¼ mile. Visibility reduction by helicopters NA. DME/DME RNP-0.3 NA.

▲

MISSED APPROACH: Climb to 3000 direct JALTI WP and hold.

ATIS	ASOS	MINNEAPOLIS CENTER	ST. CLOUD TOWER ★	GND CON	PRINCETON RADIO	UNICOM
119.375	112.1	121.05 397.9	118.25 (CTAF) 0	123.75	122.5	123.5



WAAS CH 82013 W13A	APP CRS 133°	Rwy Idg 7000 TDZE 1031 Apt Elev 1031
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RNAV (GPS) RWY 13

ST. CLOUD RGNL (STC)

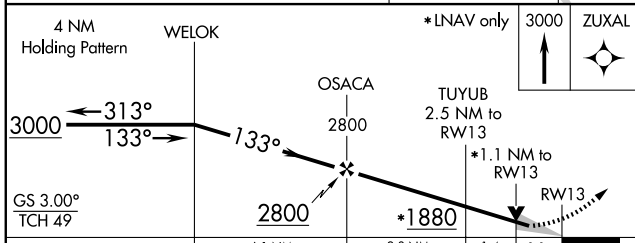
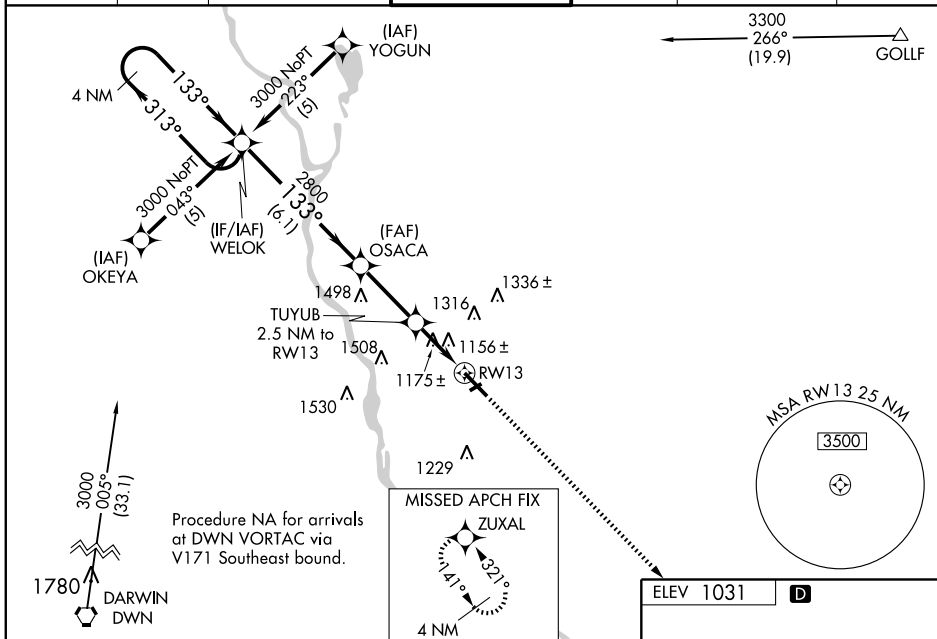
T For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. VDP and Baro-VNAV NA when using Little Falls altimeter setting. When local altimeter setting not received, use Little Falls altimeter setting and increase all DA 76 feet and all MDA 80 feet. Increase LNAV/VNAV visibility ¼ mile for all Cats. Circling to Rwy 5-23 NA at night. For inoperative MALSR, increase LNAV Cat D visibility ¼ mile. For inoperative MALSR when using Little Falls altimeter setting, increase LPV all Cats visibility ½ mile.

MALSR

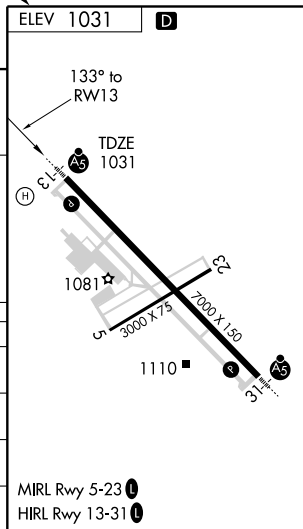


MISSED APPROACH:
Climb to 3000 direct
ZUXAL and hold.

ATIS 119.375	ASOS 112.1	MINNEAPOLIS CENTER 121.05 397.9	ST. CLOUD TOWER ★ 118.25 (CTAF) 0	GND CON 123.75	PRINCETON RADIO 122.5	UNICOM 123.5
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CATEGORY		A		B		C		D	
LPV	DA	1231-1/2		200 (200-1/2)					
LNAV/ VNAV	DA	1455-1		424 (500-1)					
LNAV	MDA	1440-1/2	409 (500-1/2)			1440-3/4 409 (500-3/4)	1440-1 409 (500-1)		
CIRCLING		1500-1	469 (500-1)			1500-1 1/2 469 (500-1 1/2)	1620-2 589 (600-2)		



APP CRS 236°	Rwy Idg TDZE Apt Elev	3000 1022 1031
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RNAV (GPS) RWY 23

ST. CLOUD RGNL (STC)

- T** When local altimeter setting not received, use Little Falls altimeter setting and increase all MDA 80 feet and LNAV Cat C visibility $\frac{1}{4}$ mile.
A Visibility reduction by helicopters NA. DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 3000 direct HUBOX WP and hold.

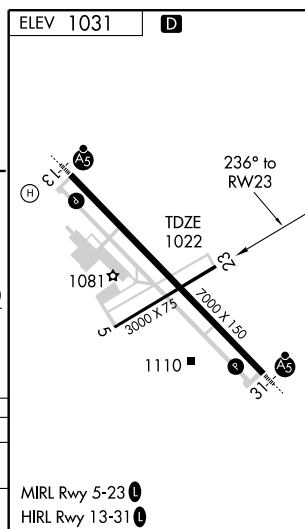
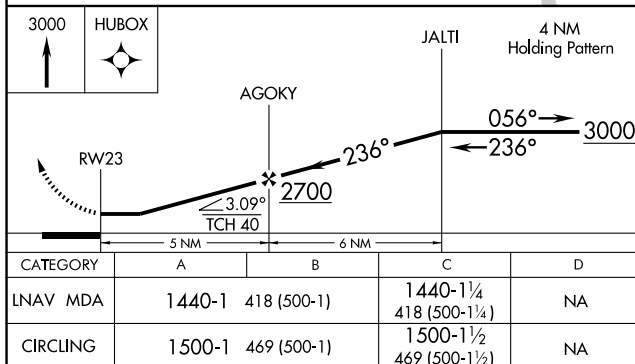
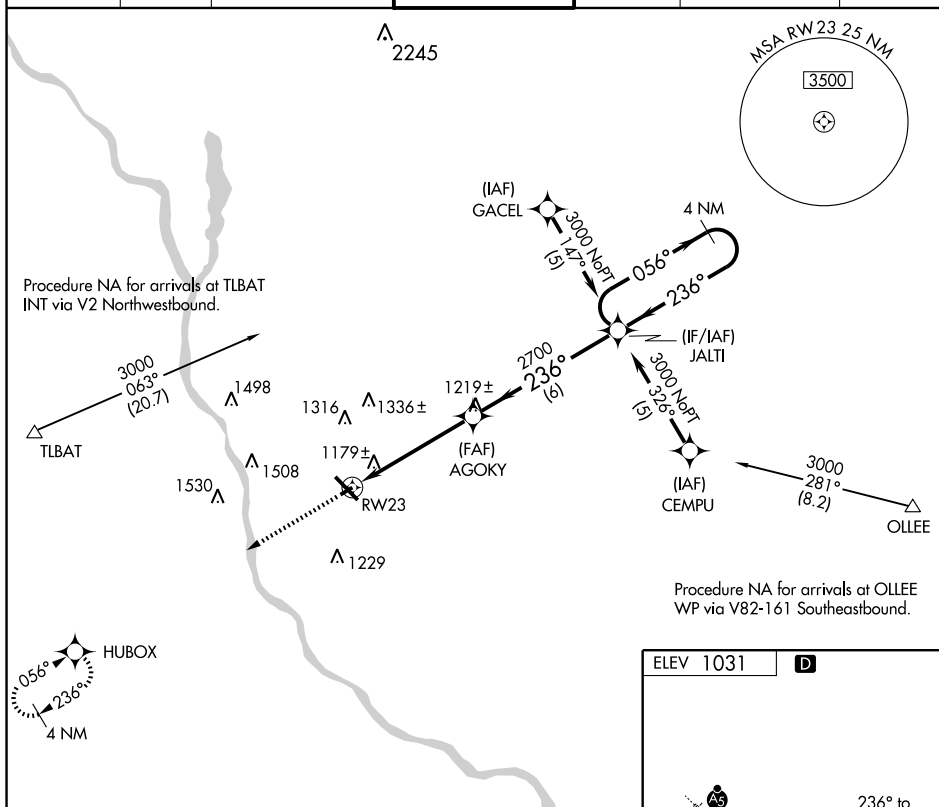
ATIS
119.375

ASOS
112.1

MINNEAPOLIS CENTER
121.05 397.9

ST. CLOUD TOWER ★
118.25 (CTAF) L

GND CON
123.75

PRINCETON RADIC
122.5UNICOM
123.5

WAAS CH 61213 W31A	APP CRS 313°	Rwy Idg TDZE Apt Elev	7000 1020 1031
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RNAV (GPS) RWY 31
ST. CLOUD RGNL (STC)

T DME/DME RNP-0.3 NA. Circling to Rwy 5-23 NA at night. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). When local altimeter setting not received, use Little Falls altimeter setting and increase all DA 76 feet and all MDA 80 feet. Increase LNAV / VNAV visibility ¼ mile all Cats. For inoperative MALSR, increase LNAV Cat D visibility ¼ mile. For inoperative MALSR when using Little Falls altimeter setting, increase LPV all Cats visibility ½ mile. Baro-VNAV and VDP NA when using Little Falls altimeter setting.

MAISR




MISSED APPROACH:
Climb to 3000 direct
WELOK and hold.

ATIS 119.375	ASOS 112.1	MINNEAPOLIS CENTER 121.05 397.9	ST. CLOUD TOWER ★ 118.25 (CTAF) 0	GND CON 123.75	PRINCETON RADIO 122.5	UNICOM 123.5
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MISSED APCH FIX	
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TLBAT



MSA RW31 25 NM
3500

Procedure NA for arrivals at
DWN VORTAC on airway
radials 078 CW 109.

ELEV 1031

D

Diagram illustrating the runway layout at HIRL, showing Runway 5-23 and Runway 13-31. Runway 5-23 is 3000 x 75 feet, and Runway 13-31 is 7000 x 150 feet. The diagram includes taxiway A5, taxiway 1081, taxiway 1110, and taxiway 31. The diagram also shows the intersection of Runway 5-23 and Runway 13-31, with a 313° bearing to RW31 and a 1078 ± distance.

DARWIN
DWN

3000

WELOK

* LNAV only

CATEGORY		A		B		C		D	
LPV	DA	1220-1/2		200 (200-1/2)					
LNAV/ VNAV	DA	1379-3/4		359 (400-3/4)					
LNAV	MDA	1440-1/2 420 (500-1/2)		1440-3/4 420 (500-3/4)		1440-1 420 (500-1)			
CIRCLING		1500-1 469 (500-1)		1500-1 1/2 469 (500-1 1/2)		1620-2 589 (600-2)			

VOR/DME STC <u>112.1</u> Chan 58	APP CRS 126°	Rwy Idg 7000 TDZE 1031 Apt Elev 1031
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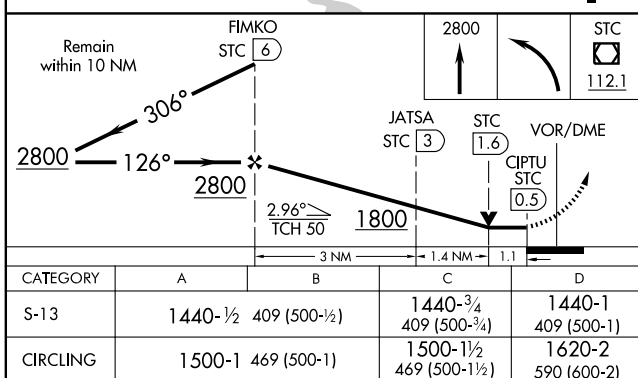
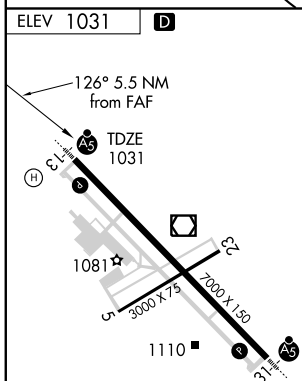
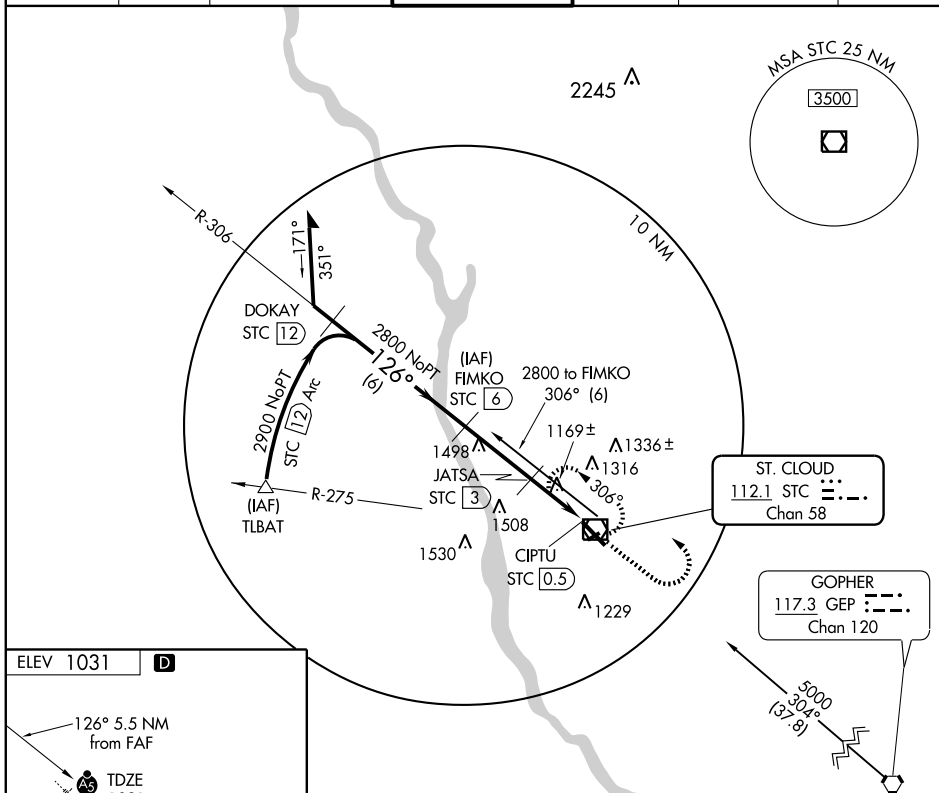
VOR/DME RWY 13
ST. CLOUD RGNL (STC)

T For inoperative MALS/R, increase Cat D visibility to 1¼. When
A local altimeter setting not received, use Little Falls altimeter
setting and increase all MDA 80 feet.

MALSR

MISSED APPROACH: Climb to 2800, then left turn direct STC VOR/DME and hold.

ATIS 119.375	ASOS 112.1	MINNEAPOLIS CENTER 121.05 397.9	ST. CLOUD TOWER ★ 118.25 (CTAF) 0	GND CON 123.75	PRINCETON RADIO 122.5	UNICOM 123.5
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VOR RWY 31
ST. CLOUD RGNL (STC)

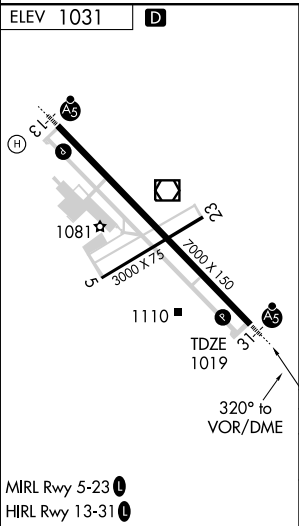
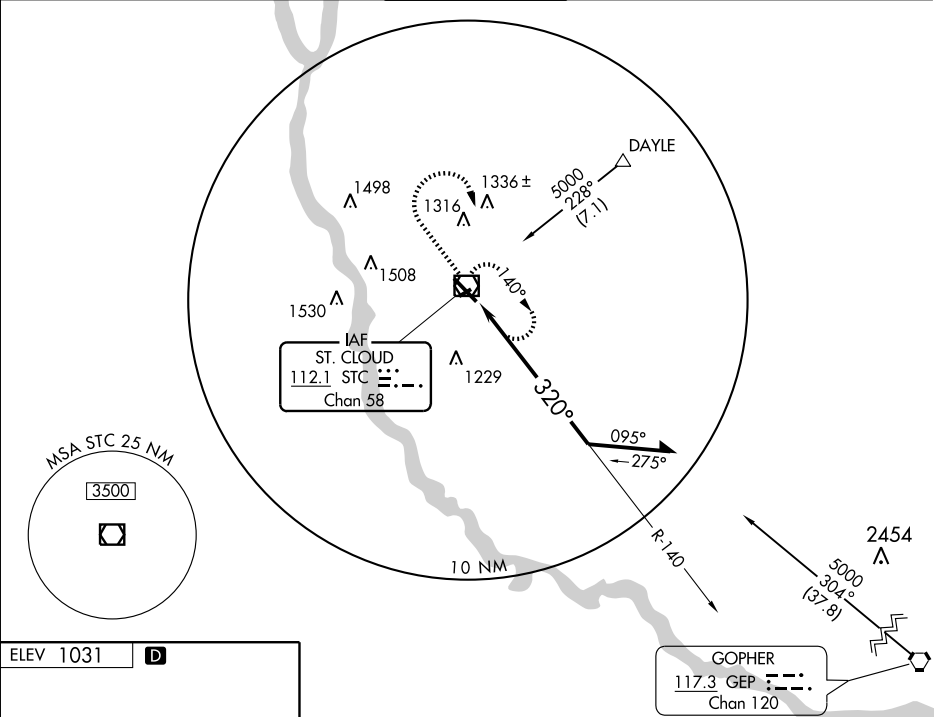
VOR/DME STC 112.1 Chan 58	APP CRS 320°	Rwy Idg TDZE Apt Elev 7000 1019 1031
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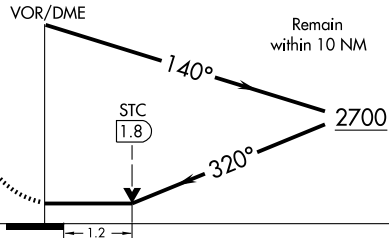
T For inoperative MALS, increase Cat D visibility to 1¼.
A When local altimeter setting not received, use Little Falls altimeter setting and increase all MDA 80 feet.



MISSED APPROACH: Climb to 2700, then right turn direct STC VOR/DME and hold.

ATIS 119.375	ASOS 112.1	MINNEAPOLIS CENTER 121.05 397.9	ST. CLOUD TOWER ★ 118.25 (CTAF) 0	GND CON 123.75	PRINCETON RADIO 122.5	UNICOM 123.5
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2700		STC  112.1				
CATEGORY	A	B	C	D		
S-31	1440-1½	421 (500-½)	1440-¾ 421 (500-¾)	1440-1 421 (500-1)		
CIRCLING	1500-1	469 (500-1)	1500-1½ 469 (500-1½)	1620-2 590 (600-2)		

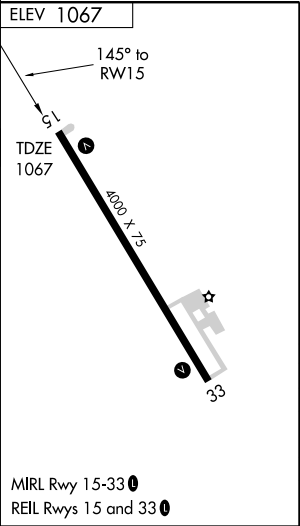
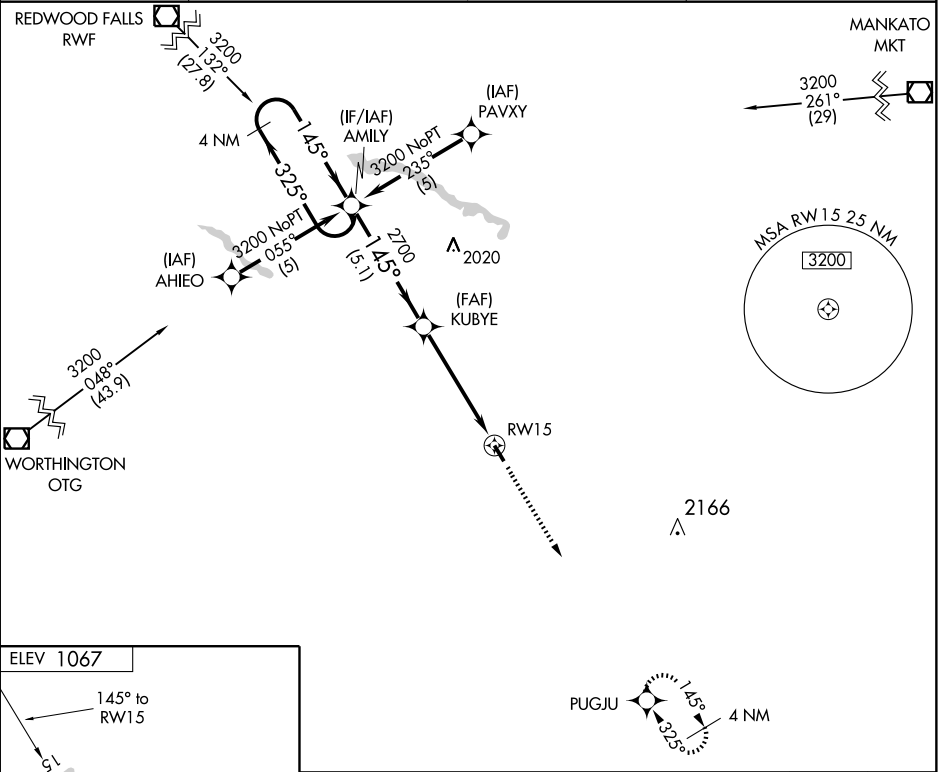
APP CRS	Rwy Idg	4000
145°	TDZE	1067
	Apt Elev	1067

RNAV (GPS) RWY 15

ST. JAMES MUNI (JYG)

 Baro-VNAV not authorized below -17°C (1°F).  NA GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.	MISSED APPROACH: Climb to 3200 via 145° course to PUGJU WP and hold.
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AWOS-3 260	MINNEAPOLIS CENTER 127.75 257.7	GCO 121.725	CTAF 122.9 0
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4 NM Holding Pattern		AMILY		VGSi and descent angles not coincident		3200 145° CRS		PUGJU	
3200		←325° 145°→		145°		KUBYE		* 1.2 NM to RW15	
GS 3.00° TCH 40				2700		* LNAV only		RW15	
		5.1 NM		3.8 NM		1.2 NM			
CATEGORY	A		B		C		D		
GLS PA DA	NA								
LNAV/ VNAV DA	1460-1½		393 (400-1½)				NA		
LNAV MDA	1480-1		413 (500-1)				NA		
CIRCLING	1500-1½		1520-1½				NA		
	433 (500-1½)		453 (500-1½)						

APP CRS
325°

Rwy Idg	4000
TDZE	1066
Apt Elev	1067

RNAV (GPS) RWY 33

ST. JAMES MUNI (JYG)



Baro-VNAV not authorized below -17°C (1°F).
GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.



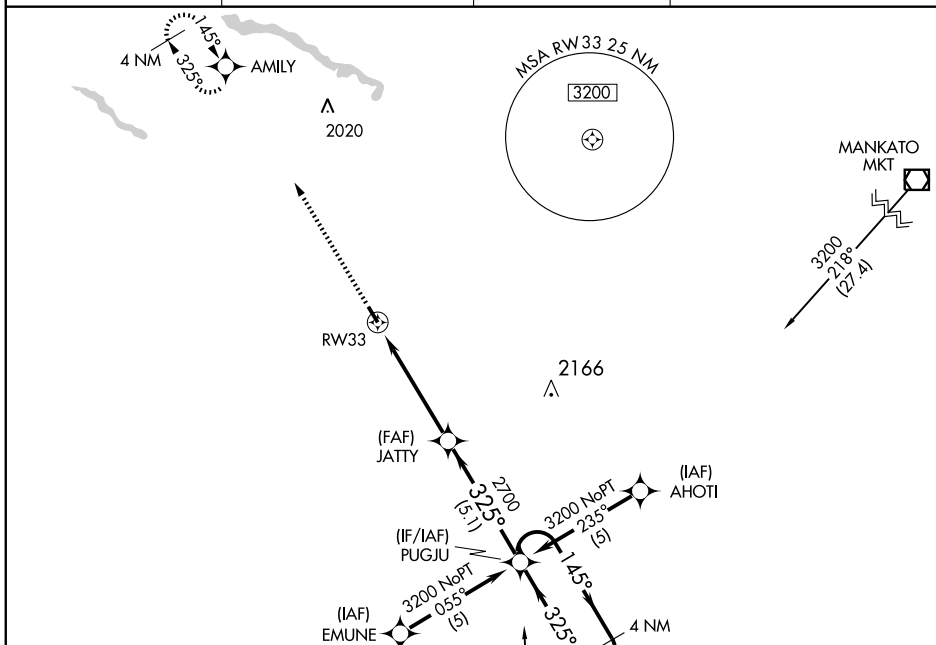
MISSED APPROACH: Climb to 3200 via 325° course to AMILY WP and hold.

AWOS-3
260

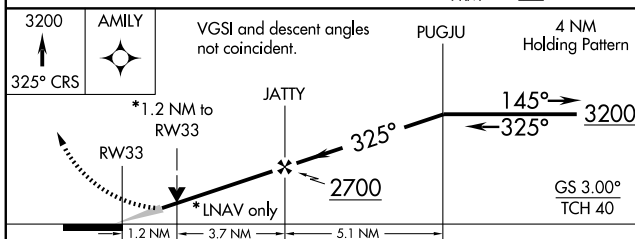
MINNEAPOLIS CENTER
127.75 257.7

GCO
121.725

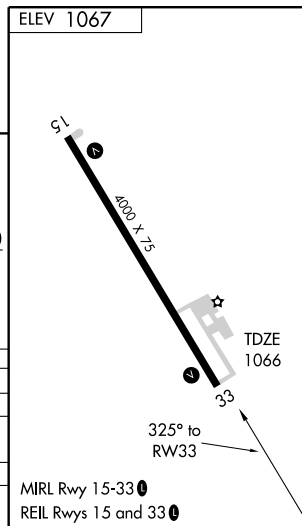
CTAF
122.9



NC-1. 17 DEC 2009 to 14 JAN 2010



CATEGORY	A	B	C	D
GLS PA DA	NA			
LNAV/ VNAV DA	1440-1¼ 374 (400-1½)		NA	
LNAV MDA	1460-1 394 (400-1)		NA	
CIRCLING	1500-1¼ 433 (500-1¼)	1520-1¼ 453 (500-1¼)	NA	



NDB RWY 4

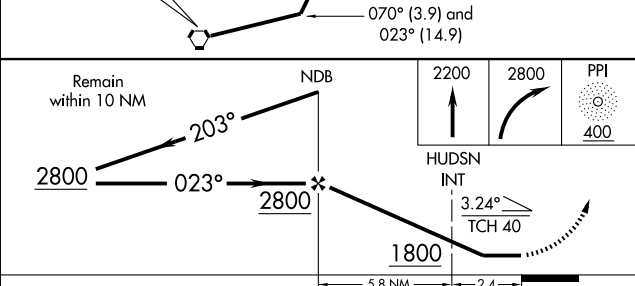
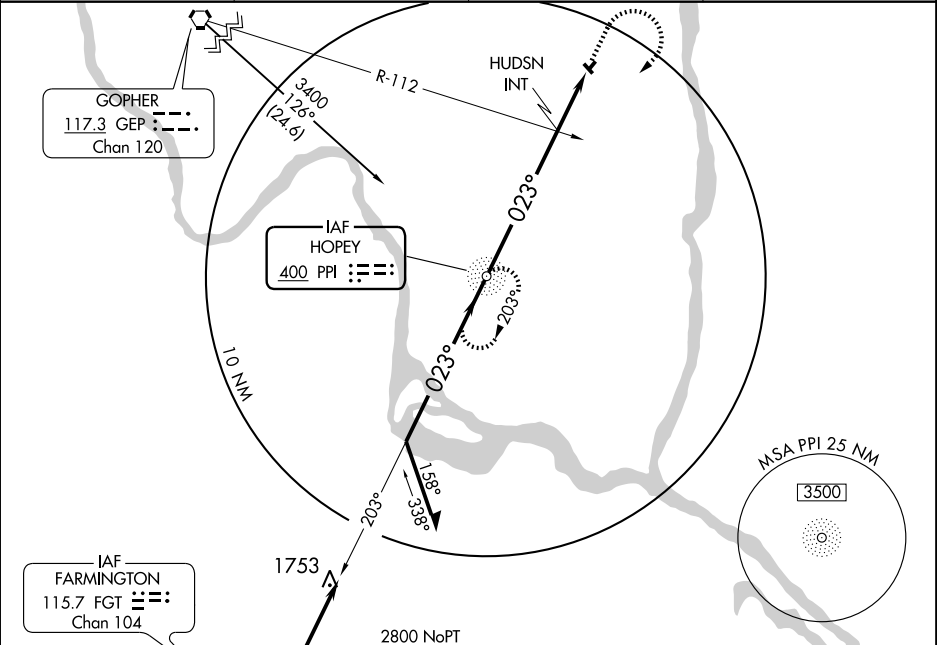
ST. PAUL/LAKE ELMO (21D)

NDB PPI 400	APP CRS 023°	Rwy Idg TDZE Apt Elev	2497 932 932
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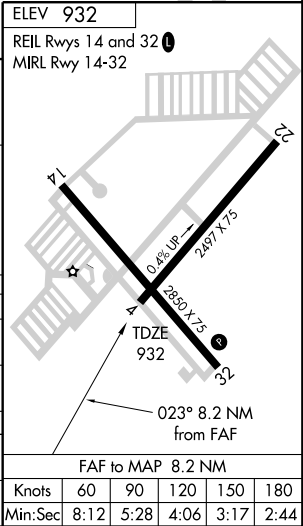
When local altimeter setting not received, use St. Paul Downtown Holman Field altimeter setting. Straight-in minimums NA at night.

MISSED APPROACH: Climb to 2200 then climbing right turn to 2800 direct PPI NDB and hold.

AWOS-3 120.075	MINNEAPOLIS APP CON 121.2	CLNC DEL 118.625	UNICOM 122.8 (CTAF) 0
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CATEGORY	A	B	C	D
S-4	1800-1 868 (900-1)	1800-1¼ 868 (900-1¼)	1800-2½ 868 (900-2½)	NA
CIRCUING	1800-1 868 (900-1)	1800-1¼ 868 (900-1¼)	1800-2½ 868 (900-2½)	NA
HUDSN FIX MINIMUMS				
S-4	1520-1 588 (600-1)	1520-1½ 588 (600-1½)	1520-1½ 588 (600-1½)	NA
CIRCUING	1520-1 588 (600-1)	1540-1 608 (700-1)	1540-1¾ 608 (700-1¾)	NA



Rwy Idg	2850
TDZE	926
Apt Elev	932

ST. PAUL/LAKE ELMO (21D)

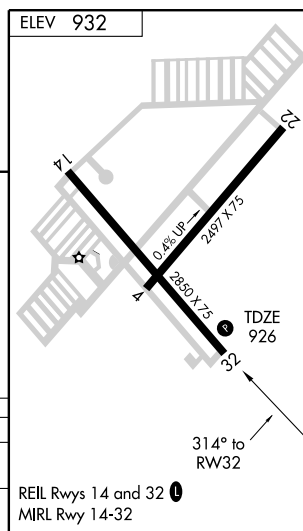
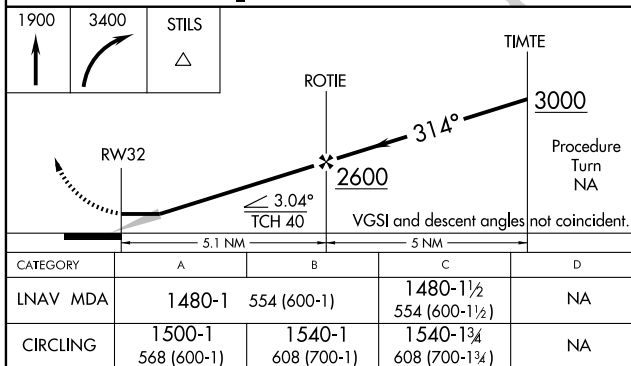
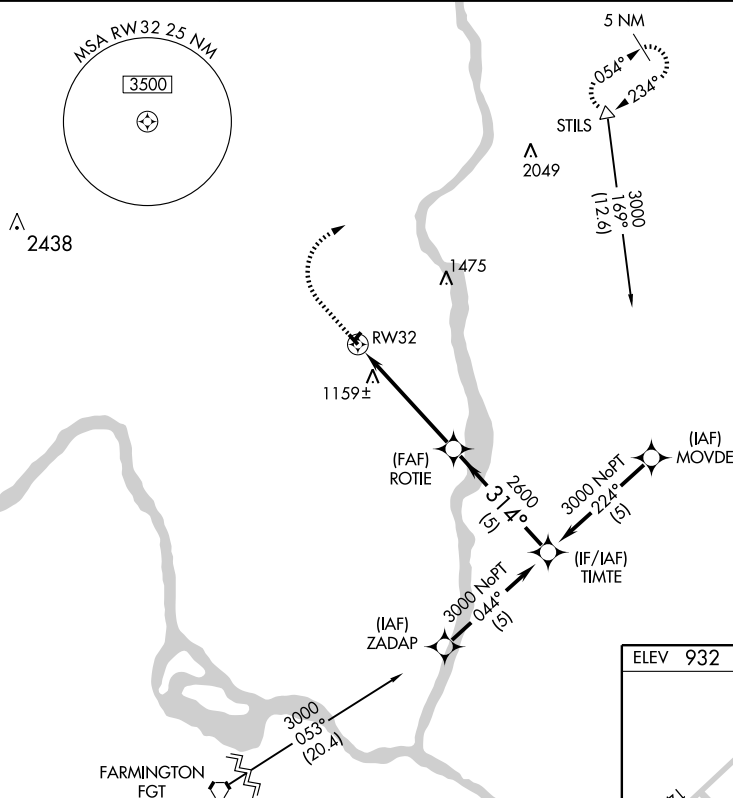


When local altimeter setting not received, use St. Paul Downtown Holman Field altimeter setting.

MISSED APPROACH: Climb to 1900 then climbing right turn to 3400 direct STILS WP and hold.

AWOS-3
120.075

MINNEAPOLIS APP CON
121.2

CLNC DEL
118.625UNICOM
122.8 (CTAF) **L**

AGUDE ONE ARRIVAL

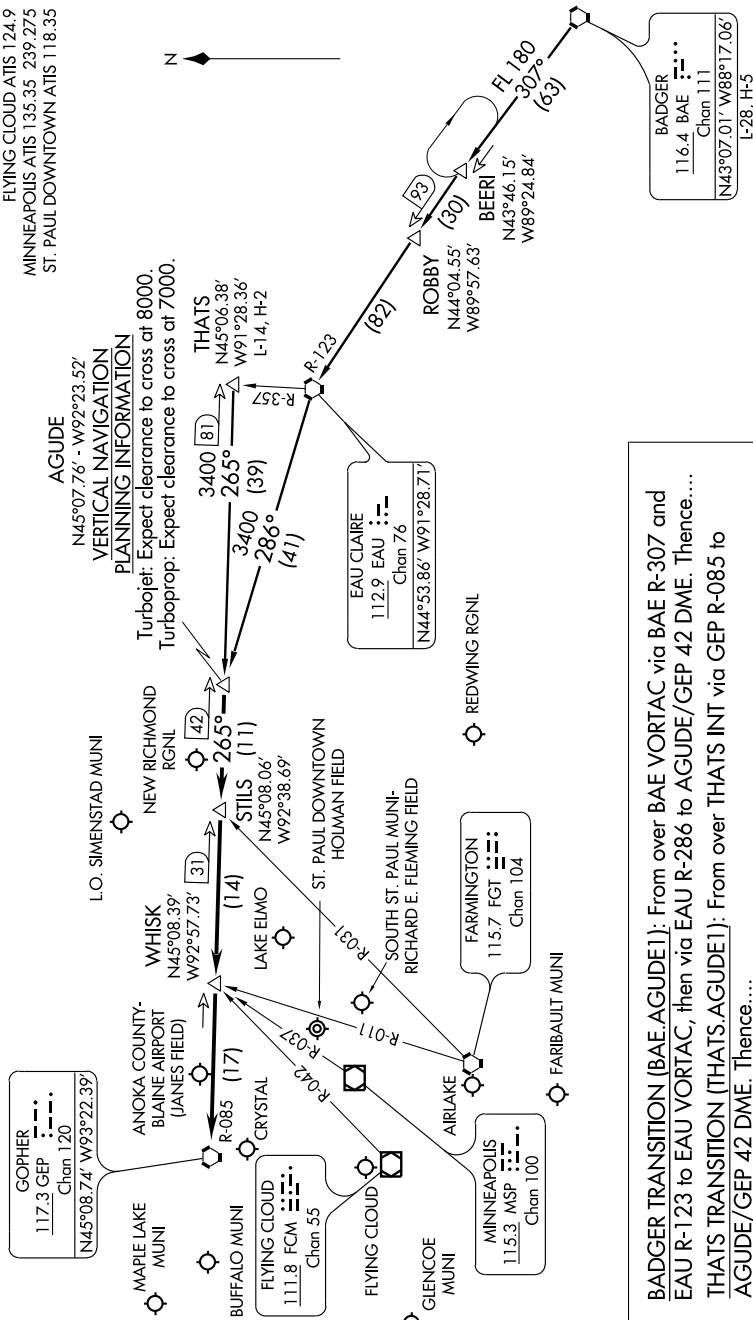
ST-263 (FAA)

MINNEAPOLIS-ST. PAUL, MINNESOTA

MINNEAPOLIS APP CON
126.95 335.5
ANOKA COUNTY ATIS 120.625
CRYSTAL ATIS 124.475
FLYING CLOUD ATIS 124.9
MINNEAPOLIS ATIS 135.35 239.275
ST. PAUL DOWNTOWN ATIS 118.35

AGUDE
N45°07.76' - W92°23.52'
VERTICAL NAVIGATION
PLANNING INFORMATION

Turbopjet: Expect clearance to cross at 8000.
Turboprop: Expect clearance to cross at 7000.

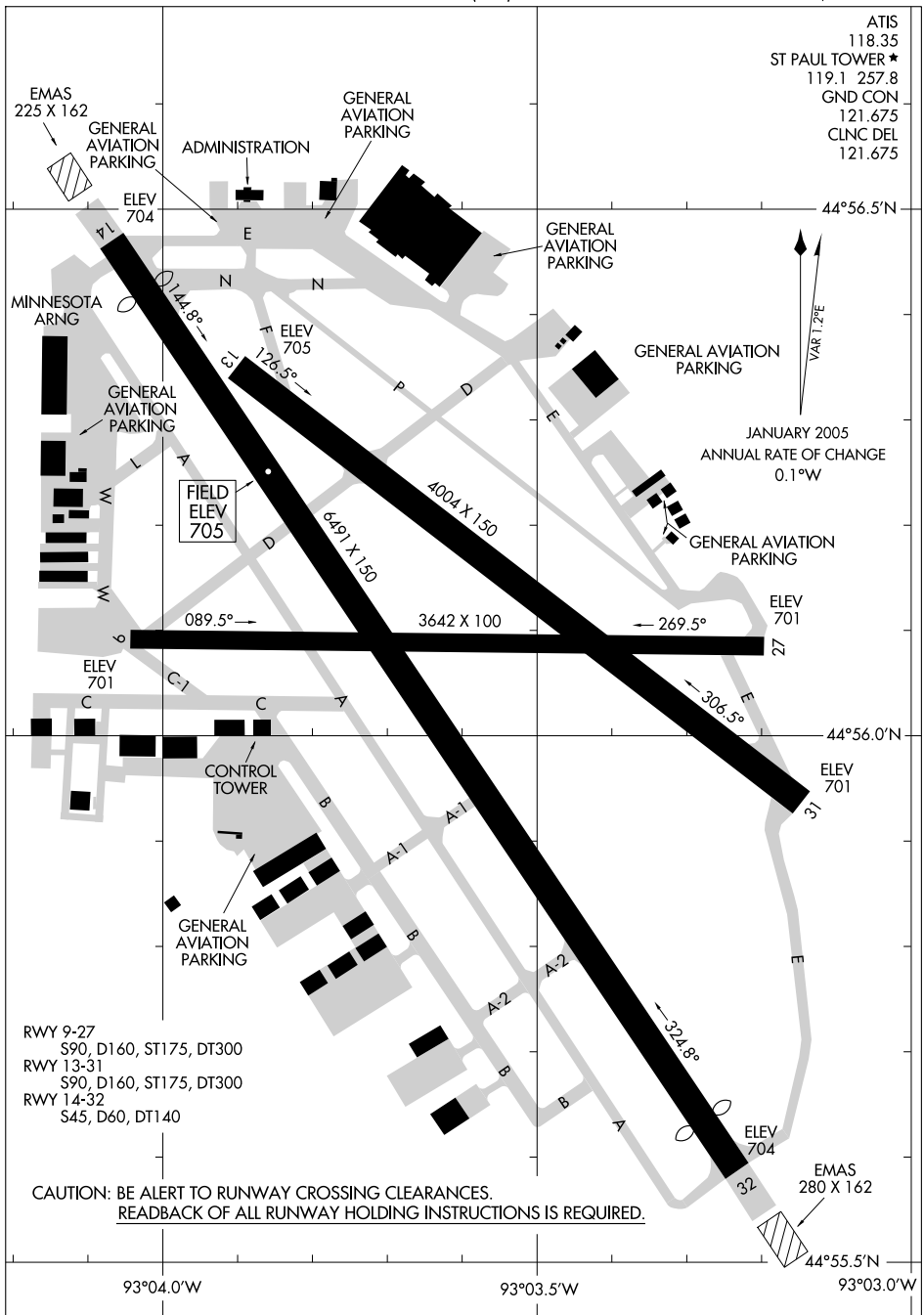


BADGER TRANSITION (BAE AGUDE1): From over BAE VORTAC via BAE R-307 and EAU R-123 to EAU VORTAC, then via EAU R-286 to AGUDE/GEF 42 DME. Thence....
THATS TRANSITION (THATS.AGUDE1): From over THATS INT via GEP R-085 to AGUDE/GEF 42 DME. Thence....
....From over AGUDE/GEF 42 DME via the GEP R-085 to GEP VORTAC, then expect radar vector to final approach course.

NOTE: DME and RADAR required.
NOTE: Chart not to scale.

AIRPORT DIAGRAM

ST. PAUL DOWNTOWN HOLMAN FIELD (STP)
ST. PAUL, MINNESOTA



NC-1, 17 DEC 2009 to 14 JAN 2010

<div><div>▲</div><div>MISSED APPROACH: Climbing right turn heading 333° to 1600 then climbing right turn to 4000 via heading 010° and FCM R-042 to WHISK INT and hold.</div></div>						
ATIS 118.35	MINNEAPOLIS APP CON 121.2 357.4	ST. PAUL TOWER ★ 119.1(CTAF) 257.8	GND CON 121.675	CLNC DEL 121.675	MINNEAPOLIS CLNC DEL 121.675 (when tower closed)	UNICOM 122.95

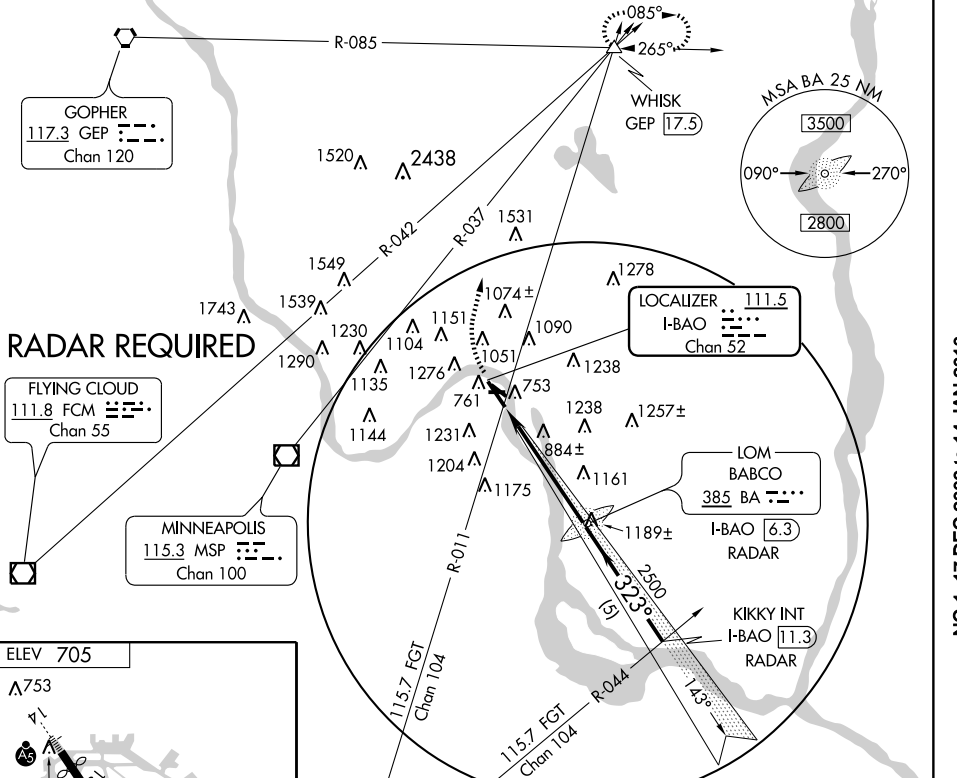


Diagram showing runway layout and navigation aids. Key features include:

- Runway 13-31 (HIRL) and Runway 14-32 (HIRL) intersecting at a 323° angle, 5.2 NM from the FAF.
- Runway 9-27 (MIRL) and Runways 31 and 32 (REIL) are also shown.
- Navigation aids: FAF to MAP 4.5 NM, TDZE 704, and various distance markers (e.g., 3642 X 100, 4004 X 150, 6491 X 150).
- Other markers: 727±, 31, 27, 32, 704, 32°.

Knots	45	60	75	90	105
Min:Sec	6:00	4:30	3:36	3:00	2:34

Diagram showing radar coverage and navigation aids. Key features include:

- Radar coverage areas: 1600, 4000, FCM R-042 111.8, WHISK, BABCO LOM I-BAO 6.3 RADAR, KIKKY INT I-BAO 11.3 RADAR.
- Navigation aids: I-BAO 1.8, 2419, 323°, 2500, GS 3.00° TCH 45.
- Distance markers: 0.7, 4.5 NM, 5 NM.

CATEGORY	COPTER	B	C	D
S-ILS 32	954-½ 250 (300-½)		NA	
S-LOC 32	1360-½ 656 (700-½)		NA	
CIRCLING			NA	

NC-1: 17 DEC 2009 to 14 JAN 2010

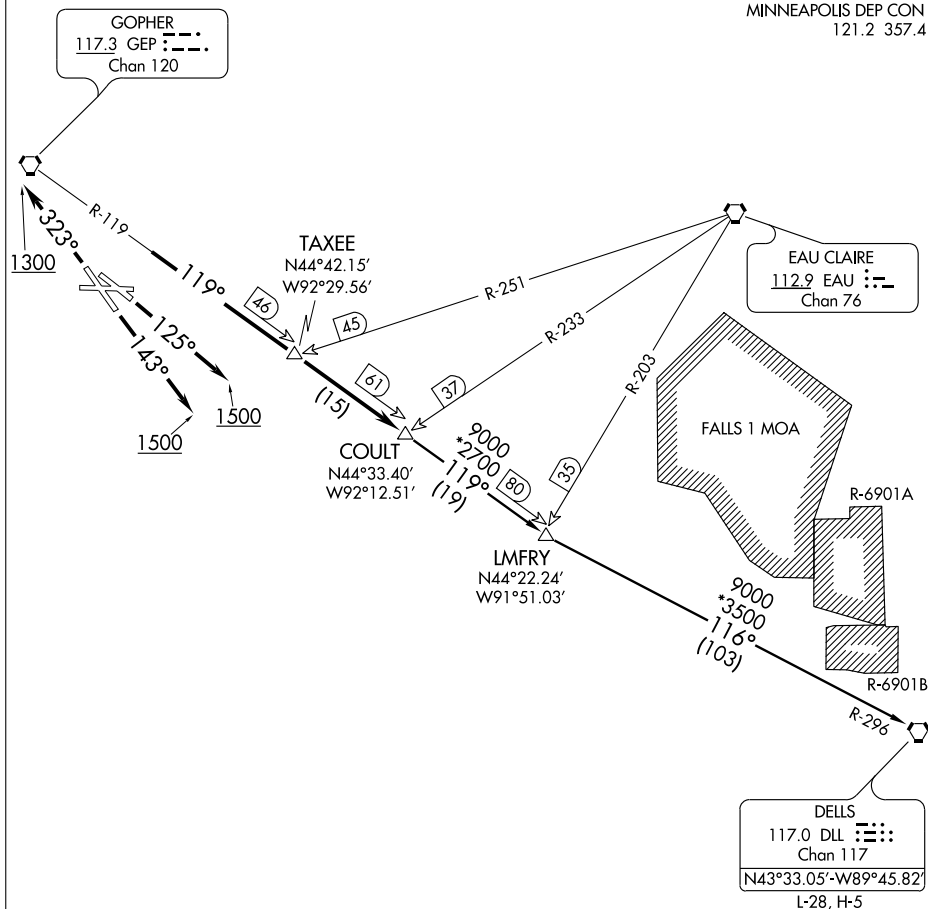
COULT TWO DEPARTURE

08157

ST. PAUL DOWNTOWN HOLMAN FIELD (STP)
SL-263 (FAA)

ST. PAUL, MINNESOTA

ATIS 118.35
CLNC DEL
121.675
MINNEAPOLIS DEP CON
121.2 357.4



TAKE-OFF MINIMUMS

Rwy 31: NA-obstacles.

Rwy 9: Standard with minimum climb of 346' per NM to 1500.

Rwy 13: Standard with minimum climb of 266' per NM to 1500.

Rwy 14: Standard with minimum climb of 216' per NM to 1500.

Rwy 27: Standard with minimum climb of 436' per NM to 1500.

Rwy 32: Standard with minimum climb of 340' per NM to 3000.

(NARRATIVE ON FOLLOWING PAGE)

NOTE: RADAR required.

NOTE: Chart not to scale.

NC-1, 17 DEC 2009 to 14 JAN 2010



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 9, 27: Fly assigned heading and altitude for radar vectors to intercept GEP R-119 to COULT INT/GEP 61 DME, thence....

TAKE-OFF RUNWAY 13: Climb heading 125° to 1500 for radar vectors to intercept GEP R-119 to COULT INT/GEP 61 DME, thence....

TAKE-OFF RUNWAY 14: Climb heading 143° to 1500 for radar vectors to intercept GEP R-119 to COULT INT/GEP 61 DME, thence....

TAKE-OFF RUNWAY 32: Climb heading 323° to 1300 for radar vectors to intercept GEP R-119 to COULT INT/GEP 61 DME, thence....

....via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

DELLS TRANSITION (COULT2.DLL): From over COULT INT via GEP R-119 and DLL R-296 to DLL VORTAC.

TAKE-OFF OBSTACLE NOTES

- RWY 9: Multiple trees beginning 1265' from DER, 167' right of centerline, up to 75' AGL/1055' MSL.
Multiple trees beginning 1.1 NM from DER, 124' left of centerline, up to 100' AGL/1099' MSL.
OL tank 1571' from DER, 771' right of centerline, 50' AGL/811' MSL.
Mobile crane 1163' from DER, 123' left of centerline, 50' AGL/758' MSL.
- RWY 13: OL stack 2695' from DER, 842' right of centerline, 50' AGL/820' MSL.
Tree 1563' from DER, 25' right of centerline, 61' AGL/748' MSL.
Multiple trees beginning 1004' from DER, 607' left of centerline, 50' AGL/767' MSL.
Tower 1725' from DER, 930' left of centerline, 47' AGL/753' MSL.
Vent on building 3029' from DER, 629' right of centerline, 10' AGL/783' MSL.
Multiple bushes beginning 194' from DER, 88' left of centerline, 7' AGL/712' MSL.
Stack 1879' from DER, 25' left of centerline, 51' AGL/751' MSL.
- RWY 14: Multiple trees beginning 805' from DER, 2' right of centerline, up to 112' AGL/811' MSL.
Multiple trees beginning 1205' from DER, 64' left of centerline, up to 80' AGL/770' MSL.
Poles 2810' from DER, 715' right of centerline, 91' AGL/778' MSL.
- RWY 27: Multiple trees beginning 803' from DER, 122' left of centerline, up to 100' AGL/994' MSL.
Tree 783' from DER, 105' right of centerline, 25' AGL/725' MSL.
OL antenna 996' from DER, 304' right of centerline, 67' AGL/767' MSL.
Light pole 1328' from DER, 222' left of centerline, 50' AGL/747' MSL.
Building 2049' from DER, 837' right of centerline, 57' AGL/761' MSL.
Flagpole 2333' from DER, 199' left of centerline, 78' AGL/778' MSL.
Stack 1.8 NM from DER, 635' left of centerline, 569' AGL/1279' MSL.
- RWY 32: Road and vehicle 211' from DER, 482' left of centerline, 17' AGL/717' MSL.
Railroad beginning 369' from DER, 329' left of centerline, up to 23' AGL/727' MSL.
Pipe on DME 383' from DER, 269' right of centerline, 17' AGL/722' MSL.
Tree 1152' from DER, 209' left of centerline, 44' AGL/744' MSL.
Tree 1685' from DER, 277' right of centerline, 75' AGL/770' MSL.
Sign 5668' from DER, 1924' left of centerline, 86' AGL/874' MSL.
Trees 5614' from DER, 1796' right of centerline, 100' AGL/939' MSL.
Building 5779' from DER, 1733' right of centerline, 72' AGL/910' MSL.
Pole 1 NM from DER, 1835' right of centerline, 157' AGL/973' MSL.
Building 1.1 NM from DER, 2170' left of centerline, 122' AGL/886' MSL.
Multiple buildings beginning 1.1 NM from DER, 378' left of centerline, up to 142' AGL/918' MSL.

NC-1-17 DEC 2009 to 14 JAN 2010



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 9, 27: Fly assigned heading and altitude for radar vectors to MSP VOR/DME then via MSP R-281 and DWN R-095 to DWN VORTAC, thence....

TAKE-OFF RUNWAY 13: Climb heading 125° to 1500 for radar vectors to MSP VOR/DME then via MSP R-281 and DWN R-095 to DWN VORTAC, thence....

TAKE-OFF RUNWAY 14: Climb heading 143° to 1500 for radar vectors to MSP VOR/DME then via MSP R-281 and DWN R-095 to DWN VORTAC, thence....

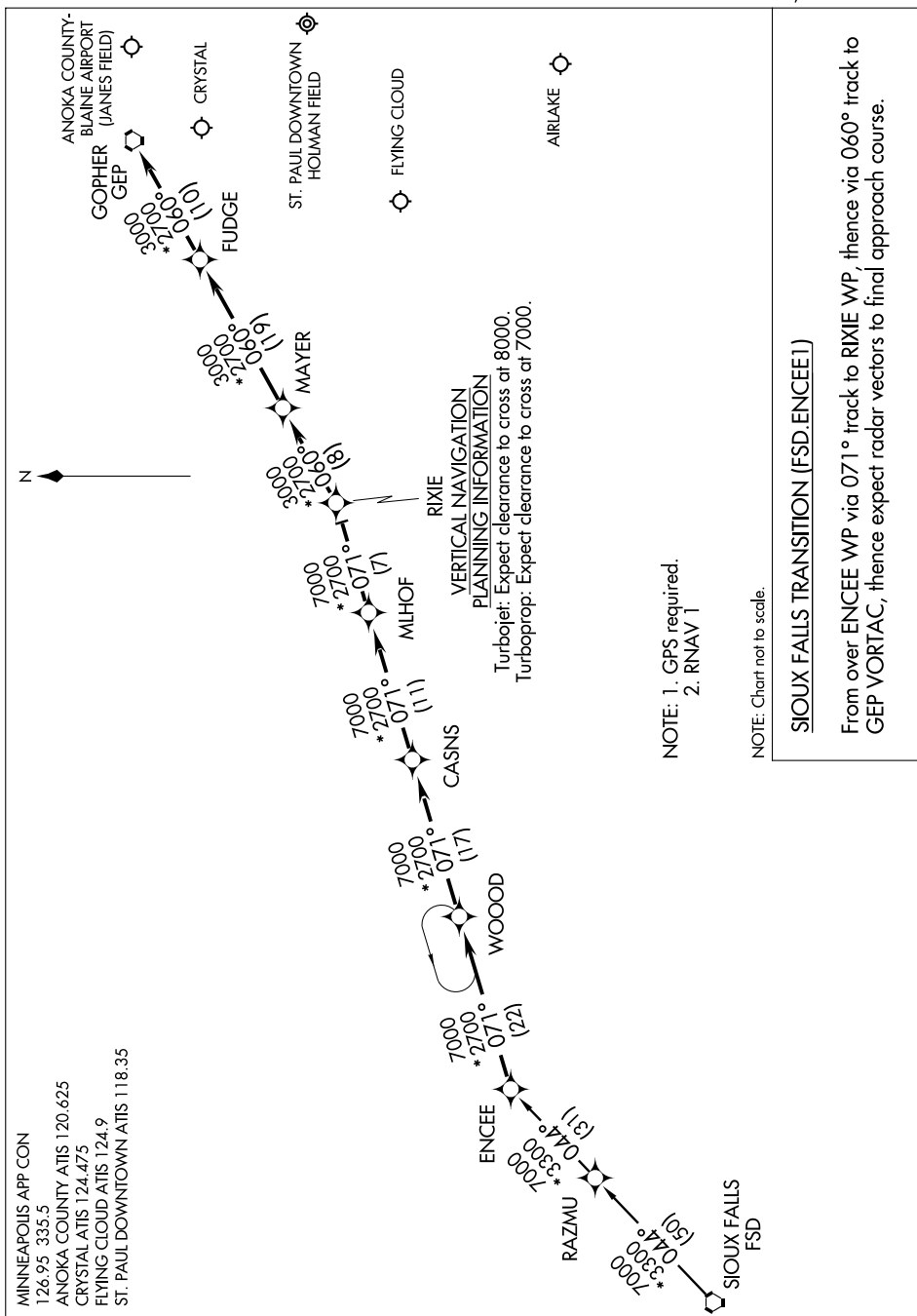
TAKE-OFF RUNWAY 32: Climb heading 323° to 1300 for radar vectors to MSP VOR/DME then via MSP R-281 and DWN R-095 to DWN VORTAC, thence....

...via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

ABERDEEN TRANSITION (DWN2.ABR): From over DWN VORTAC via DWN R-271 and ABR R-088 to ABR VOR/DME.

TAKE-OFF OBSTACLE NOTES

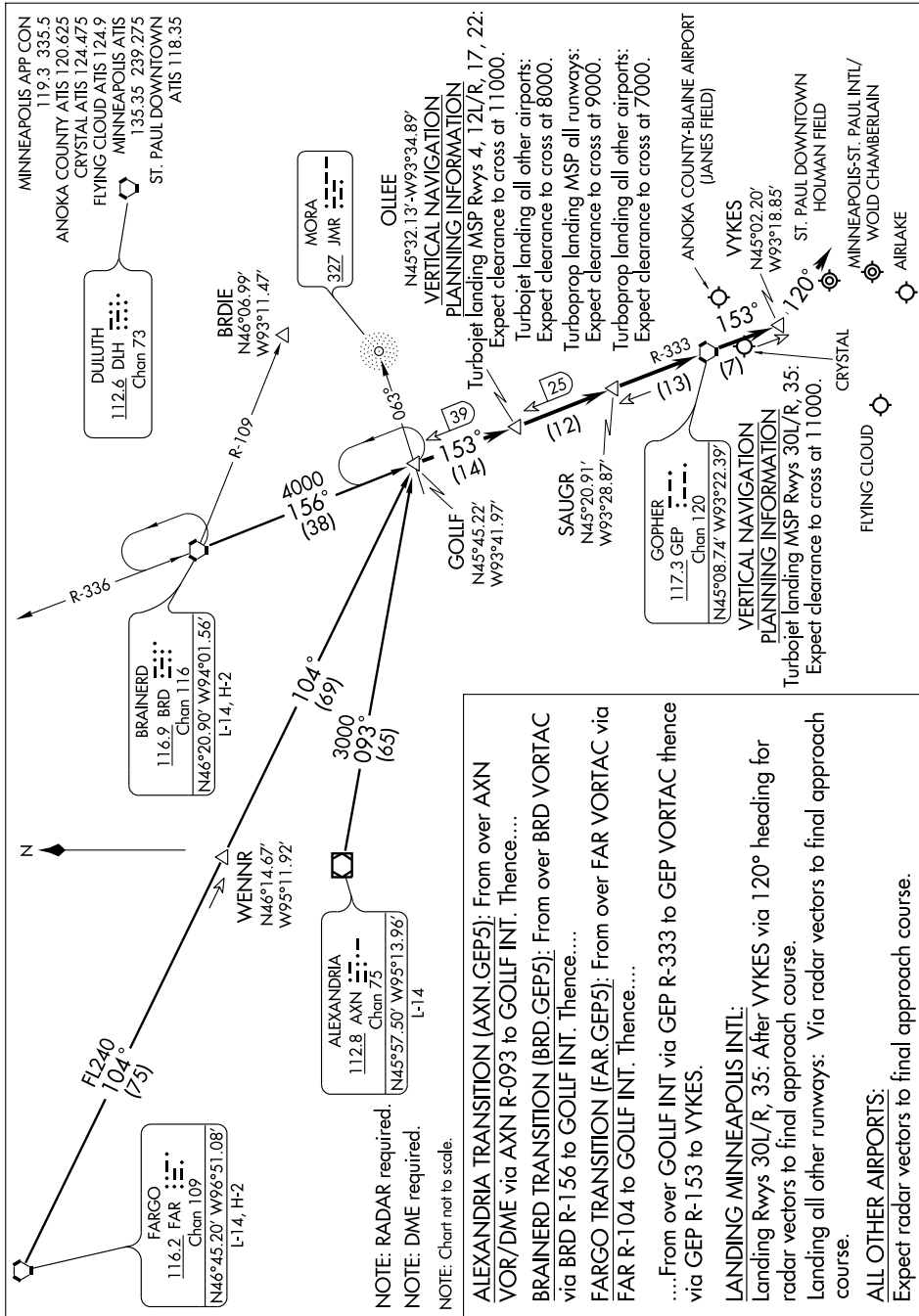
- RWY 9: Multiple trees beginning 1265' from DER, 167' right of centerline, up to 75' AGL/1055' MSL.
Multiple trees beginning 1.1 NM from DER, 124' left of centerline, up to 100' AGL/1099' MSL.
OL tank 1571' from DER, 771' right of centerline, 50' AGL/811' MSL.
Mobile crane 1163' from DER, 123' left of centerline, 50' AGL/758' MSL.
- RWY 13: OL stack 2695' from DER, 842' right of centerline, 50' AGL/820' MSL.
Tree 1563' from DER, 25' right of centerline, 61' AGL/748' MSL.
Multiple trees beginning 1004' from DER, 607' left of centerline, 50' AGL/767' MSL.
Tower 1725' from DER, 930' left of centerline, 47' AGL/753' MSL.
Vent on building 3029' from DER, 629' right of centerline, 10' AGL/783' MSL.
Multiple bushes beginning 194' from DER, 88' left of centerline, 7' AGL/712' MSL.
Stack 1879' from DER, 25' left of centerline, 51' AGL/751' MSL.
- RWY 14: Multiple trees beginning 805' from DER, 2' right of centerline, up to 112' AGL/811' MSL.
Multiple trees beginning 1205' from DER, 64' left of centerline, up to 80' AGL/770' MSL.
Poles 2810' from DER, 715' right of centerline, 91' AGL/778' MSL.
- RWY 27: Multiple trees beginning 803' from DER, 122' left of centerline, up to 100' AGL/994' MSL.
Tree 783' from DER, 105' right of centerline, 25' AGL/725' MSL.
OL antenna 996' from DER, 304' right of centerline, 67' AGL/767' MSL.
Light pole 1328' from DER, 222' left of centerline, 50' AGL/747' MSL.
Building 2049' from DER, 837' right of centerline, 57' AGL/761' MSL.
Flagpole 2333' from DER, 199' left of centerline, 78' AGL/778' MSL.
Stack 1.8 NM from DER, 635' left of centerline, 569' AGL/1279' MSL.
- RWY 32: Road and vehicle 211' from DER, 482' left of centerline, 17' AGL/717' MSL.
Railroad beginning 369' from DER, 329' left of centerline, up to 23' AGL/727' MSL.
Pipe on DME 383' from DER, 269' right of centerline, 17' AGL/722' MSL.
Tree 1152' from DER, 209' left of centerline, 44' AGL/744' MSL.
Tree 1685' from DER, 277' right of centerline, 75' AGL/770' MSL.
Sign 5668' from DER, 1924' left of centerline, 86' AGL/874' MSL.
Trees 5614' from DER, 1796' right of centerline, 100' AGL/939' MSL.
Building 5779' from DER, 1733' right of centerline, 72' AGL/910' MSL.
Pole 1 NM from DER, 1835' right of centerline, 157' AGL/973' MSL.
Building 1.1 NM from DER, 2170' left of centerline, 122' AGL/886' MSL.
Multiple buildings beginning 1.1 NM from DER, 378' left of centerline, up to 142' AGL/918' MSL.



GOPHER FIVE ARRIVAL

ST-264 (FAA)

MINNEAPOLIS, MINNESOTA



LOC/DME I-BAO 111.5 Chan 52	APP CRS 323°	Rwy Idg 6109 TDZE 704 Apt Elev 705
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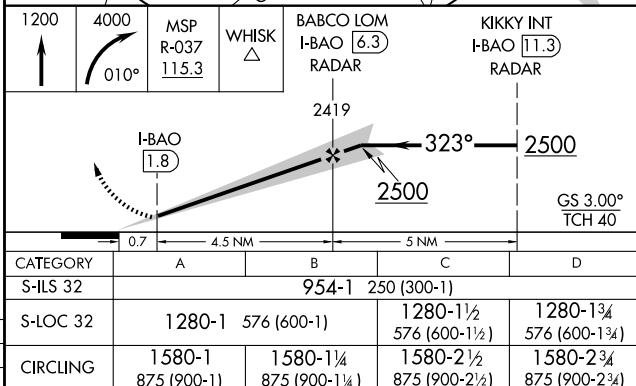
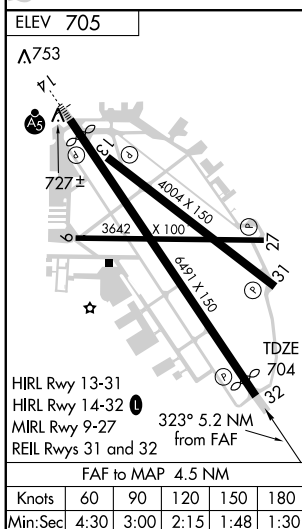
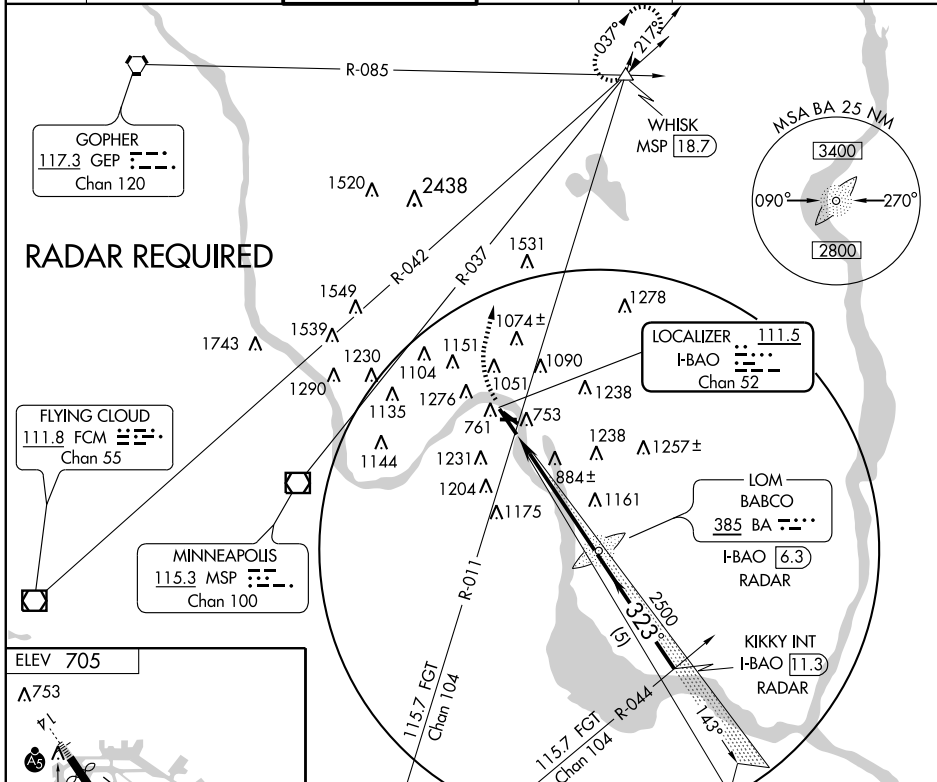
ILS or LOC RWY 32

ST. PAUL DOWNTOWN HOLMAN FIELD (STP)



MISSED APPROACH: Climb to 1200 then climbing right turn to 4000 heading 010° and MSP R-037 to WHISK INT/MSP 18.7 DME and hold.

ATIS 118.35	MINNEAPOLIS APP CON 121.2 357.4	ST. PAUL TOWER ★ 119.1(CTAF) 0 257.8	GND CON 121.675	CLNC DEL 121.675	MINNEAPOLIS CLNC DEL 121.675 (when tower closed)	UNICOM 122.95
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KBREW TWO DEPARTURE

ST. PAUL DOWNTOWN HOLMAN FIELD (STP)

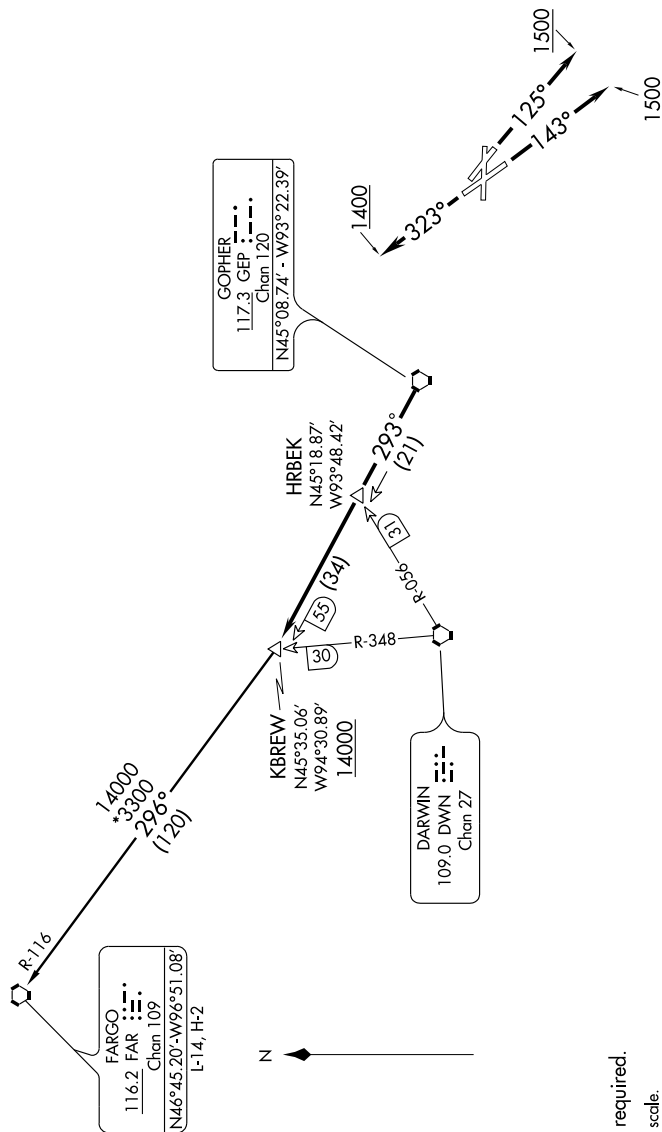
SL-263 (FAA)

ST. PAUL, MINNESOTA

ATIS 118.35
CLNC DEL
121.6/5
MINNEAPOLIS DEP CON
121.2 357.4

TAKE-OFF MINIMUMS

- Rwy 31: NA-obstacles.
Rwy 9: Standard with minimum climb of 346' per NM to 1500.
Rwy 13: Standard with minimum climb of 266' per NM to 1500.
Rwy 14: Standard with minimum climb of 216' per NM to 1500.
Rwy 27: Standard with minimum climb of 436' per NM to 1500.
Rwy 32: Standard with minimum climb of 340' per NM to 3000.



(NARRATIVE ON FOLLOWING PAGE)

NOTE: RADAR required.

NOTE: Chart not to scale.



DEPARTURE ROUTE DESCRIPTON

TAKE-OFF RUNWAYS 9, 27: Fly assigned heading and altitude for radar vectors to GEP VORTAC then via GEP R-293 to KBREW INT/ GEP 55 DME, thence....

TAKE-OFF RUNWAY 13: Climb heading 125° to 1500 for radar vectors to GEP VORTAC then via GEP R-293 to KBREW INT/ GEP 55 DME, thence....

TAKE-OFF RUNWAY 14: Climb heading 143° to 1500 for radar vectors to GEP VORTAC then via GEP R-293 to KBREW INT/ GEP 55 DME, thence....

TAKE-OFF RUNWAY 32: Climb heading 323° to 1400 for radar vectors to GEP VORTAC then via GEP R-293 to KBREW INT/ GEP 55 DME, thence....

....via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

FARGO TRANSITION (KBREW2.FAR): From over KBREW INT via FAR R-116 to FAR VORTAC.

TAKE-OFF OBSTACLE NOTES

- RWY 9: Multiple trees beginning 1265' from DER, 167' right of centerline, up to 75' AGL/1055' MSL.
Multiple trees beginning 1.1 NM from DER, 124' left of centerline, up to 100' AGL/1099' MSL.
OL tank 1571' from DER, 771' right of centerline, 50' AGL/811' MSL.
Mobile crane 1163' from DER, 123' left of centerline, 50' AGL/758' MSL.
- RWY 13: OL stack 2695' from DER, 842' right of centerline, 50' AGL/820' MSL.
Tree 1563' from DER, 25' right of centerline, 61' AGL/748' MSL.
Multiple trees beginning 1004' from DER, 607' left of centerline, 50' AGL/767' MSL.
Tower 1725' from DER, 930' left of centerline, 47' AGL/753' MSL.
Vent on building 3029' from DER, 629' right of centerline, 10' AGL/783' MSL.
Multiple bushes beginning 194' from DER, 88' left of centerline, 7' AGL/712' MSL.
Stack 1879' from DER, 25' left of centerline, 51' AGL/751' MSL.
- RWY 14: Multiple trees beginning 805' from DER, 2' right of centerline, up to 112' AGL/811' MSL.
Multiple trees beginning 1205' from DER, 64' left of centerline, up to 80' AGL/770' MSL.
Poles 2810' from DER, 715' right of centerline, 91' AGL/778' MSL.
- RWY 27: Multiple trees beginning 803' from DER, 122' left of centerline, up to 100' AGL/994' MSL.
Tree 783' from DER, 105' right of centerline, 25' AGL/725' MSL.
OL antenna 996' from DER, 304' right of centerline, 67' AGL/767' MSL.
Light pole 1328' from DER, 222' left of centerline, 50' AGL/747' MSL.
Building 2049' from DER, 837' right of centerline, 57' AGL/761' MSL.
Flagpole 2333' from DER, 199' left of centerline, 78' AGL/778' MSL.
Stack 1.8 NM from DER, 635' left of centerline, 569' AGL/1279' MSL.
- RWY 32: Road and vehicle 211' from DER, 482' left of centerline, 17' AGL/717' MSL.
Railroad beginning 369' from DER, 329' left of centerline, up to 23' AGL/727' MSL.
Pipe on DME 383' from DER, 269' right of centerline, 17' AGL/722' MSL.
Tree 1152' from DER, 209' left of centerline, 44' AGL/744' MSL.
Tree 1685' from DER, 277' right of centerline, 75' AGL/770' MSL.
Sign 5668' from DER, 1924' left of centerline, 86' AGL/874' MSL.
Trees 5614' from DER, 1796' right of centerline, 100' AGL/939' MSL.
Building 5779' from DER, 1733' right of centerline, 72' AGL/910' MSL.
Pole 1 NM from DER, 1835' right of centerline, 157' AGL/973' MSL.
Building 1.1 NM from DER, 2170' left of centerline, 122' AGL/886' MSL.
Multiple buildings beginning 1.1 NM from DER, 378' left of centerline, up to 142' AGL/918' MSL.

NDB PPI	APP CRS	Rwy Idg	4004
<u>400</u>	304°	TDZE	704
		Apt Elev	705

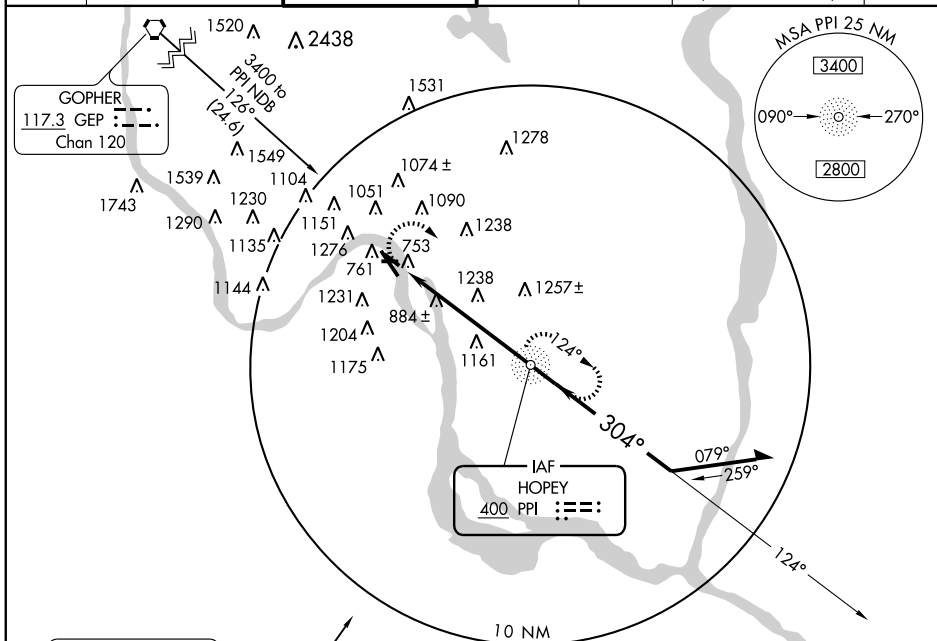
NDB RWY 31

ST. PAUL DOWNTOWN HOLMAN FIELD (STP)

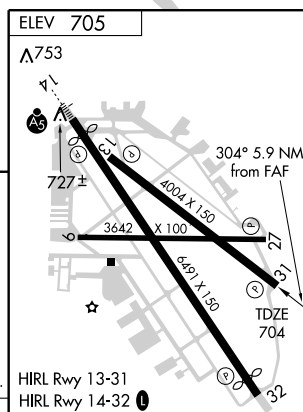
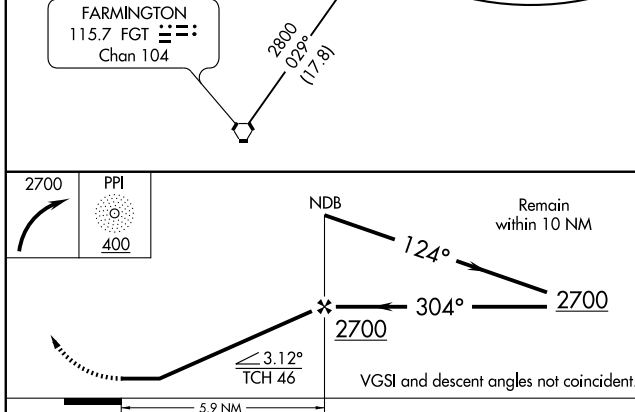


MISSED APPROACH: Climbing right turn to 2700 direct PPI NDB and hold.

ATIS 118.35	MINNEAPOLIS APP CON 121.2 357.4	ST. PAUL TOWER ★ 119.1(CTAF) 0 257.8	GND CON 121.675	CLNC DEL 121.675	MINNEAPOLIS CLNC DEL 121.675 (when tower closed)	UNICOM 122.95
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NC-1. 17 DEC 2009 to 14 JAN 2010



CATEGORY	A	B	C	D
S-31	1600-1¼	896 (900-1¼)	1600-2¾ 896 (900-2¾)	1600-3 896 (900-3)
CIRCLING	1600-1¼	895 (900-1¼)	1600-2¾ 895 (900-2¾)	1600-3 895 (900-3)

MIRL Rwy 9-27						
REIL Rwys 31 and 32						
FAF to MAP 5.9 NM						
Knots	60	90	120	150	180	
Min:Sec	5:54	3:56	2:57	2:22	1:58	

NOTE: RADAR required.
NOTE: Chart not to scale.

Rwy 9: Standard with minimum climb of 346' per NM to 1500.
Rwy 13: Standard with minimum climb of 266' per NM to 1500.
Rwy 14: Standard with minimum climb of 216' per NM to 1500.
Rwy 27: Standard with minimum climb of 436' per NM to 1500.
Rwy 32: Standard with minimum climb of 340' per NM to 3000.

ORSKY THREE DEPARTURE

ST. PAUL DOWNTOWN HOLMAN FIELD (STP)

SL-263 (FAA)

ST. PAUL, MINNESOTA



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 9, 27: Fly assigned heading and altitude for radar vectors to MSP VOR/DME then via MSP R-208 to ORSKY INT/ MSP 85 DME, thence....

TAKE-OFF RUNWAY 13: Climb heading 125° to 1500 for radar vectors to MSP VOR/DME then via MSP R-208 to ORSKY INT/ MSP 85 DME, thence....

TAKE-OFF RUNWAY 14: Climb heading 143° to 1500 for radar vectors to MSP VOR/DME then via MSP R-208 to ORSKY INT/ MSP 85 DME, thence....

TAKE-OFF RUNWAY 32: Climb heading 323° to 1500 for radar vectors to MSP VOR/DME then via MSP R-208 to ORSKY INT/ MSP 85 DME, thence....

...via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

FORT DODGE TRANSITION (ORSKY3.FOD): From over ORSKY INT via FOD R-356 to FOD VORTAC.

OMAHA TRANSITION (ORSKY3.OVR): From over ORSKY INT via MSP R-208 to ONTIJ INT then via OVR R-015 to OVR VORTAC.

TAKE-OFF OBSTACLE NOTES

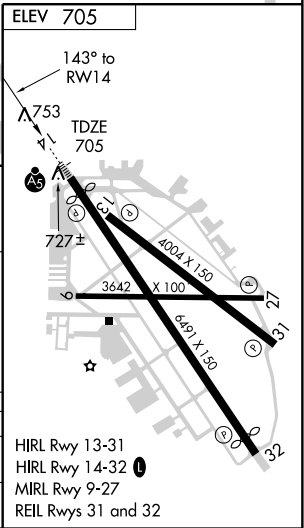
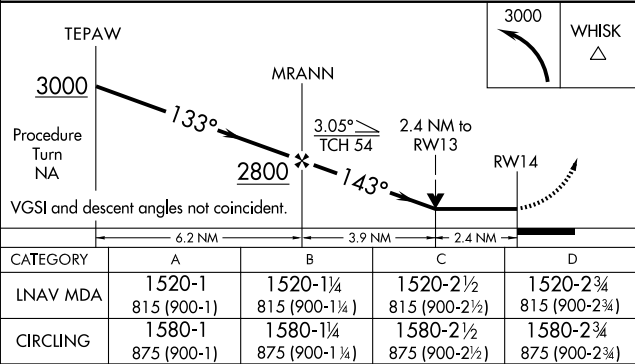
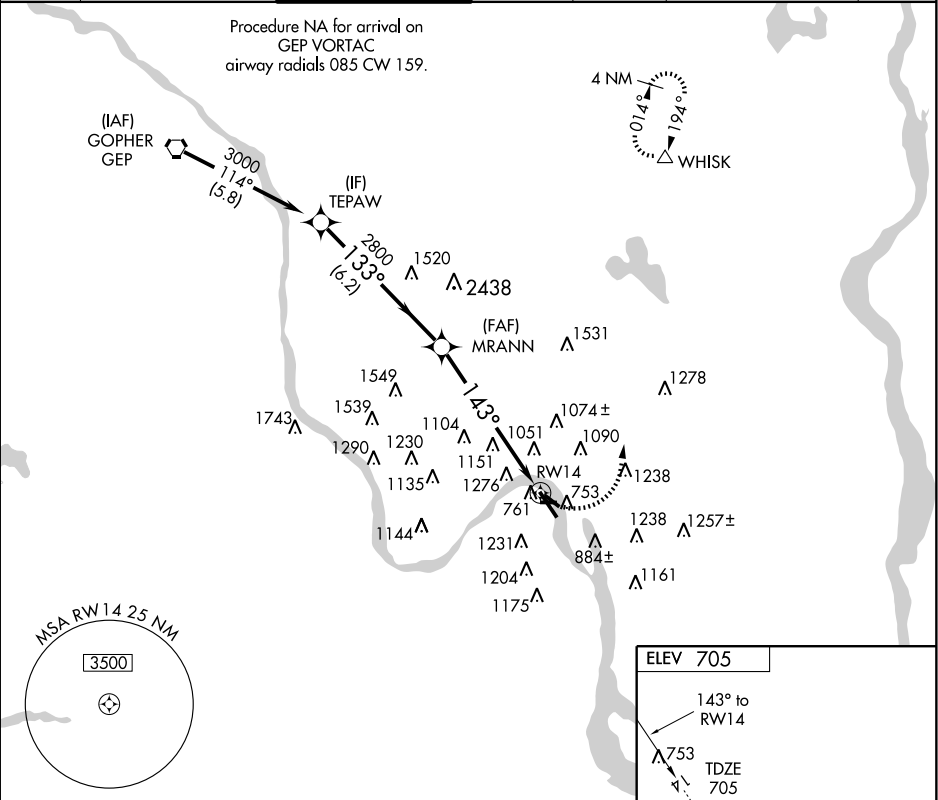
- RWY 9: Multiple trees beginning 1265' from DER, 167' right of centerline, up to 75' AGL/1055' MSL.
Multiple trees beginning 1.1 NM from DER, 124' left of centerline, up to 100' AGL/1099' MSL.
OL tank 1571' from DER, 771' right of centerline, 50' AGL/811' MSL.
Mobile crane 1163' from DER, 123' left of centerline, 50' AGL/758' MSL.
- RWY 13: OL stack 2695' from DER, 842' right of centerline, 50' AGL/820' MSL.
Tree 1563' from DER, 25' right of centerline, 61' AGL/748' MSL.
Multiple trees beginning 1004' from DER, 607' left of centerline, 50' AGL/767' MSL.
Tower 1725' from DER, 930' left of centerline, 47' AGL/753' MSL.
Vent on building 3029' from DER, 629' right of centerline, 10' AGL/783' MSL.
Multiple bushes beginning 194' from DER, 88' left of centerline, 7' AGL/712' MSL.
Stack 1879' from DER, 25' left of centerline, 51' AGL/751' MSL.
- RWY 14: Multiple trees beginning 805' from DER, 2' right of centerline, up to 112' AGL/811' MSL.
Multiple trees beginning 1205' from DER, 64' left of centerline, up to 80' AGL/770' MSL.
Poles 2810' from DER, 715' right of centerline, 91' AGL/778' MSL.
- RWY 27: Multiple trees beginning 803' from DER, 122' left of centerline, up to 100' AGL/994' MSL.
Tree 783' from DER, 105' right of centerline, 25' AGL/725' MSL.
OL antenna 996' from DER, 304' right of centerline, 67' AGL/767' MSL.
Light pole 1328' from DER, 222' left of centerline, 50' AGL/747' MSL.
Building 2049' from DER, 837' right of centerline, 57' AGL/761' MSL.
Flagpole 2333' from DER, 199' left of centerline, 78' AGL/778' MSL.
Stack 1.8 NM from DER, 635' left of centerline, 569' AGL/1279' MSL.
- RWY 32: Road and vehicle 211' from DER, 482' left of centerline, 17' AGL/717' MSL.
Railroad beginning 369' from DER, 329' left of centerline, up to 23' AGL/727' MSL.
Pipe on DME 383' from DER, 269' right of centerline, 17' AGL/722' MSL.
Tree 1152' from DER, 209' left of centerline, 44' AGL/744' MSL.
Tree 1685' from DER, 277' right of centerline, 75' AGL/770' MSL.
Sign 5668' from DER, 1924' left of centerline, 86' AGL/874' MSL.
Trees 5614' from DER, 1796' right of centerline, 100' AGL/939' MSL.
Building 5779' from DER, 1733' right of centerline, 72' AGL/910' MSL.
Pole 1 NM from DER, 1835' right of centerline, 157' AGL/973' MSL.
Building 1.1 NM from DER, 2170' left of centerline, 122' AGL/886' MSL.
Multiple buildings beginning 1.1 NM from DER, 378' left of centerline, up to 142' AGL/918' MSL.

APP CRS	Rwy Idg	6148
143°	TDZE	705
	Apt Elev	705

RNAV (GPS) RWY 14

ST. PAUL DOWNTOWN HOLMAN FIELD (STP)

<div><div><div></div><div></div></div><div>DME/DME RNP-0.3 NA Circling to Rwy 9, 13, 27 NA at night. Straight-in minimums NA at night.</div></div>			<div>MALSR</div> <div><div></div><div></div></div>		MISSED APPROACH: Climbing left turn to 3000 direct WHISK and hold.	
ATIS	MINNEAPOLIS APP CON	ST. PAUL TOWER ★	GND CON	CLNC DEL	MINNEAPOLIS CLNC DEL	UNICOM
118.35	121.2 357.4	119.1(CTAF) 257.8	121.675	121.675	121.675 (when tower closed)	122.95



WAAS CH 50123 W32A	APP CRS 323°	Rwy Idg 6109 TDZE 704 Apt Elev 705
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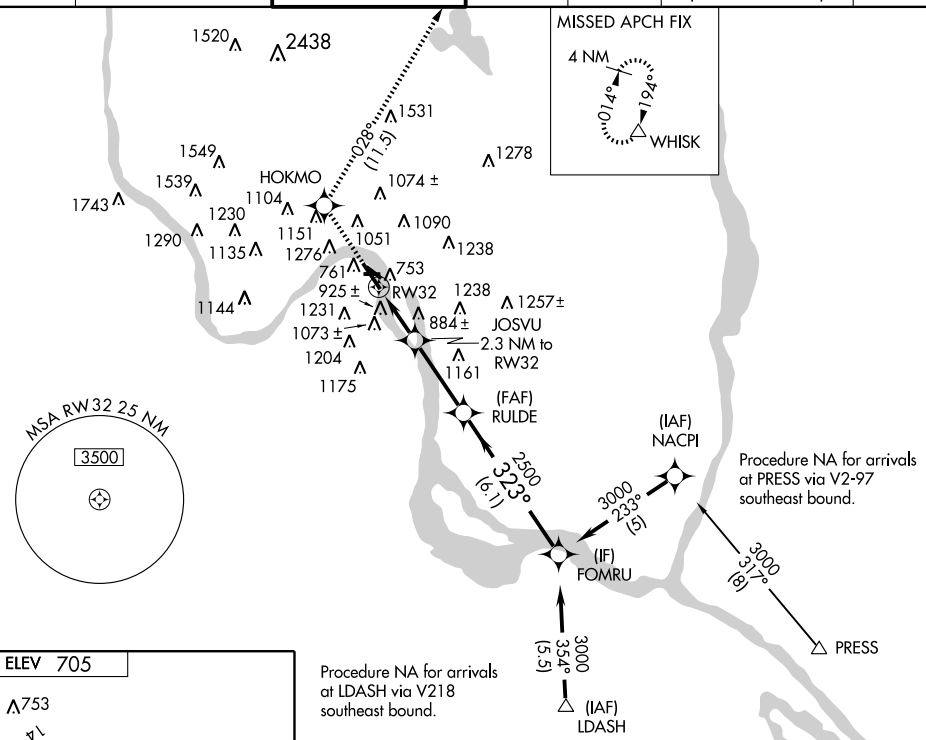
RNAV (GPS) RWY 32

ST. PAUL DOWNTOWN HOLMAN FIELD (STP)

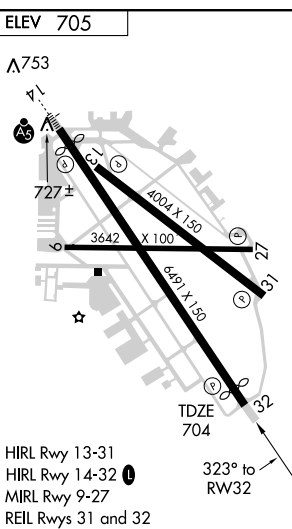
T DME/DME RNP-0.3 NA.
A Baro-VNAV NA below -16°C (4°F).
Circling to Rwy 9, 13, 27 NA at night.






MISSED APPROACH: Climb to 3000 direct HOKMO and via 028° track to WHISK and hold.

ATIS	MINNEAPOLIS APP CON	ST. PAUL TOWER ★	GND CON	CLNC DEL	MINNEAPOLIS CLNC DEL	UNICOM
118.35	121.2 357.4	119.1 (CTAF) 0 257.8	121.675	121.675	121.675 (when tower closed)	122.95

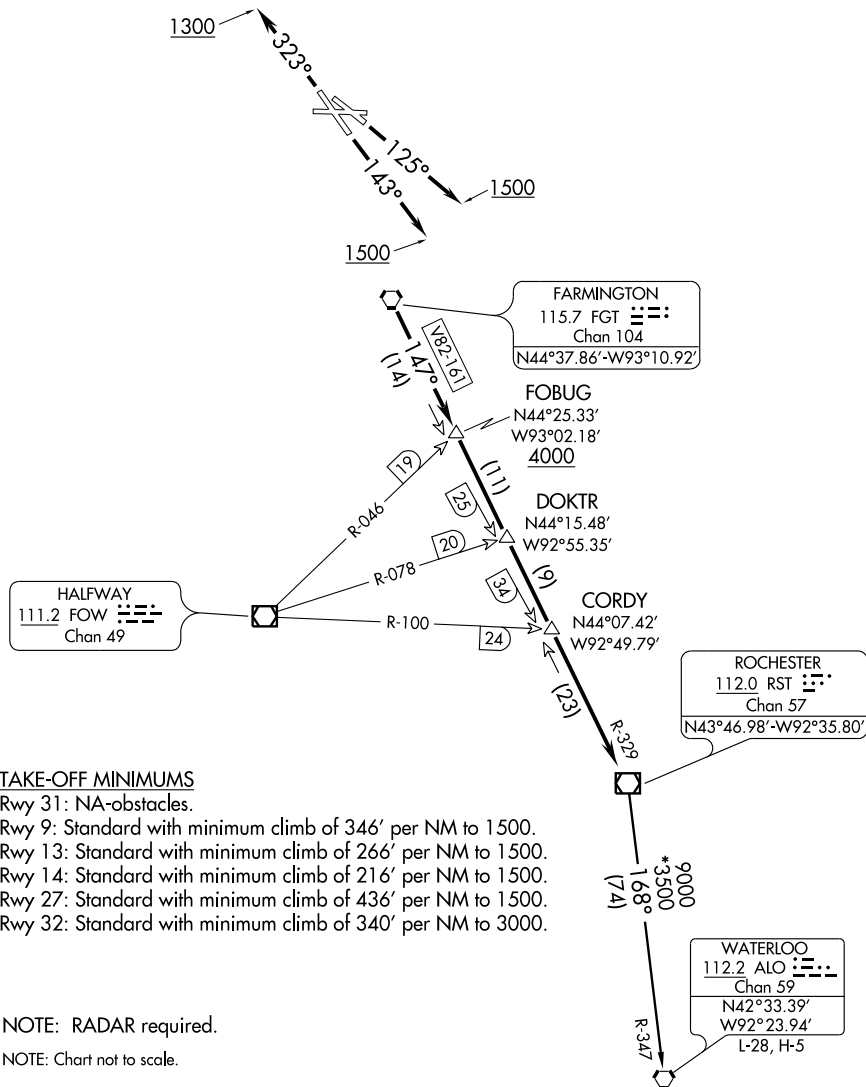


NC-1. 17 DEC 2009 to 14 JAN 2010



				028° Track		WHISK △			
		RW32 		JOSVU 2.3 NM to RW32		RULDE 		FOMRU 	
		2.3 NM		3.1 NM		6.1 NM		3000 Procedure Turn NA GS 3.00° TCH 45	
CATEGORY		A		B		C		D	
LPV DA				1082-1¼		378 (400-1¼)			
LNAV/VNAV DA				1377-2½		673 (700-2½)			
LNAV MDA		1320-1 616 (700-1)		1320-1¾ 616 (700-1¾)		1320-2 616 (700-2)			
CIRCLING		1580-2½ 875 (900-2½)		1580-2¾ 875 (900-2¾)		1580-3 875 (900-3)			

ATIS 118.35
CLNC DEL
121.675
MINNEAPOLIS DEP CON
121.2 357.4



(NARRATIVE ON FOLLOWING PAGE)



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 9, 27: Fly assigned heading and altitude for radar vectors to FGT VORTAC then via FGT R-147 and RST R-329 to RST VOR/DME. Cross FOBUG INT/ FGT 14 DME at or above 4000, thence....

TAKE-OFF RUNWAY 13: Climb heading 125° to 1500 for radar vectors to FGT VORTAC then via FGT R-147 and RST R-329 to RST VOR/DME. Cross FOBUG INT/FGT 14 DME at or above 4000, thence....

TAKE-OFF RUNWAY 14: Climb heading 143° to 1500 for radar vectors to FGT VORTAC then via FGT R-147 and RST R-329 to RST VOR/DME. Cross FOBUG INT/ FGT 14 DME at or above 4000, thence....

TAKE-OFF RUNWAY 32: Climb heading 323° to 1300 for radar vectors to FGT VORTAC then via FGT R-147 and RST R-329 to RST VOR/DME. Cross FOBUG INT/ FGT 14 DME at or above 4000, thence....

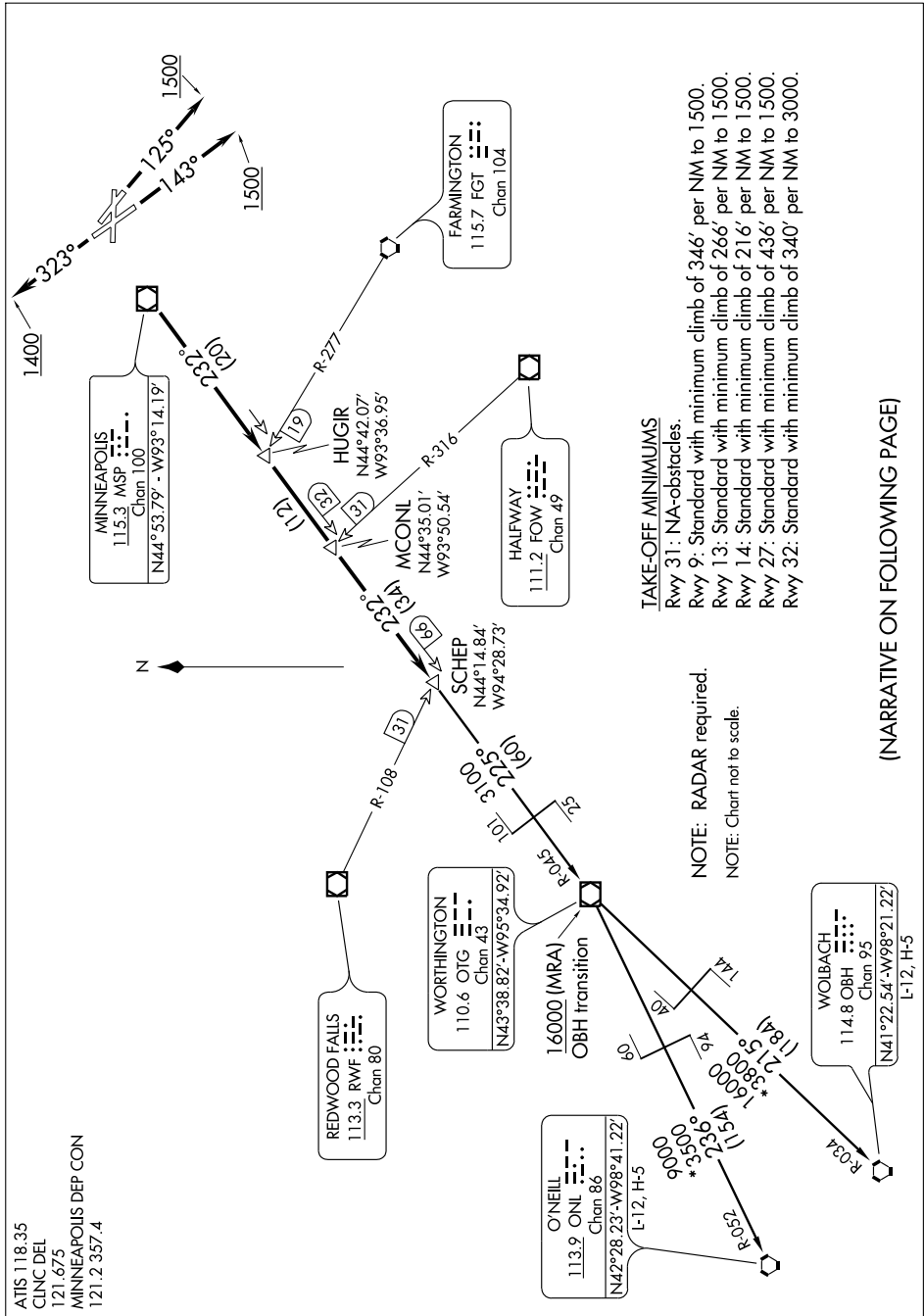
...via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

WATERLOO TRANSITION (RST3.ALO): From over RST VOR/DME via RST R-168 and ALO R-347 to ALO VORTAC.

TAKE-OFF OBSTACLE NOTES

- RWY 9: Multiple trees beginning 1265' from DER, 167' right of centerline, up to 75' AGL/1055' MSL.
Multiple trees beginning 1.1 NM from DER, 124' left of centerline, up to 100' AGL/1099' MSL.
OL tank 1571' from DER, 771' right of centerline, 50' AGL/811' MSL.
Mobile crane 1163' from DER, 123' left of centerline, 50' AGL/758' MSL.
- RWY 13: OL stack 2695' from DER, 842' right of centerline, 50' AGL/820' MSL.
Tree 1563' from DER, 25' right of centerline, 61' AGL/748' MSL.
Multiple trees beginning 1004' from DER, 607' left of centerline, 50' AGL/767' MSL.
Tower 1725' from DER, 930' left of centerline, 47' AGL/753' MSL.
Vent on building 3029' from DER, 629' right of centerline, 10' AGL/783' MSL.
Multiple bushes beginning 194' from DER, 88' left of centerline, 7' AGL/712' MSL.
Stack 1879' from DER, 25' left of centerline, 51' AGL/751' MSL.
- RWY 14: Multiple trees beginning 805' from DER, 2' right of centerline, up to 112' AGL/811' MSL.
Multiple trees beginning 1205' from DER, 64' left of centerline, up to 80' AGL/770' MSL.
Poles 2810' from DER, 715' right of centerline, 91' AGL/778' MSL.
- RWY 27: Multiple trees beginning 803' from DER, 122' left of centerline, up to 100' AGL/994' MSL.
Tree 783' from DER, 105' right of centerline, 25' AGL/725' MSL.
OL antenna 996' from DER, 304' right of centerline, 67' AGL/767' MSL.
Light pole 1328' from DER, 222' left of centerline, 50' AGL/747' MSL.
Building 2049' from DER, 837' right of centerline, 57' AGL/761' MSL.
Flagpole 2333' from DER, 199' left of centerline, 78' AGL/778' MSL.
Stack 1.8 NM from DER, 635' left of centerline, 569' AGL/1279' MSL.
- RWY 32: Road and vehicle 211' from DER, 482' left of centerline, 17' AGL/717' MSL.
Railroad beginning 369' from DER, 329' left of centerline, up to 23' AGL/727' MSL.
Pipe on DME 383' from DER, 269' right of centerline, 17' AGL/722' MSL.
Tree 1152' from DER, 209' left of centerline, 44' AGL/744' MSL.
Tree 1685' from DER, 277' right of centerline, 75' AGL/770' MSL.
Sign 5668' from DER, 1924' left of centerline, 86' AGL/874' MSL.
Trees 5614' from DER, 1796' right of centerline, 100' AGL/939' MSL.
Building 5779' from DER, 1733' right of centerline, 72' AGL/910' MSL.
Pole 1 NM from DER, 1835' right of centerline, 157' AGL/973' MSL.
Building 1.1 NM from DER, 2170' left of centerline, 122' AGL/886' MSL.
Multiple buildings beginning 1.1 NM from DER, 378' left of centerline, up to 142' AGL/918' MSL.

SCHEP TWO DEPARTURE

ST. PAUL DOWNTOWN HOLMAN FIELD (STP)
SL-263 (FAA) ST. PAUL, MINNESOTA

SCHEP TWO DEPARTURE



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 9, 27: Fly assigned heading and altitude for radar vectors to MSP VOR/DME then via MSP R-232 to SCHEP INT/ MSP 66 DME, thence....

TAKE-OFF RUNWAY 13: Climb heading 125° to 1500 for radar vectors to MSP VOR/DME then via MSP R-232 to SCHEP INT/ MSP 66 DME, thence....

TAKE-OFF RUNWAY 14: Climb heading 143° to 1500 for radar vectors to MSP VOR/DME then via MSP R-232 to SCHEP INT/ MSP 66 DME, thence....

TAKE-OFF RUNWAY 32: Climb heading 323° to 1400 for radar vectors to MSP VOR/DME then via MSP R-232 to SCHEP INT/ MSP 66 DME, thence....

...via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

O'NEILL TRANSITION (SCHEP2.ONL): From over SCHEP INT via OTG R-045 to OTG VOR/DME, then via OTG R-236 and ONL R-052 to ONL VORTAC.

WOLBACH TRANSITION (SCHEP2.OBH): From over SCHEP INT via OTG R-045 to OTG VOR/DME, then via OTG R-215 and OBH R-034 to OBH VORTAC.

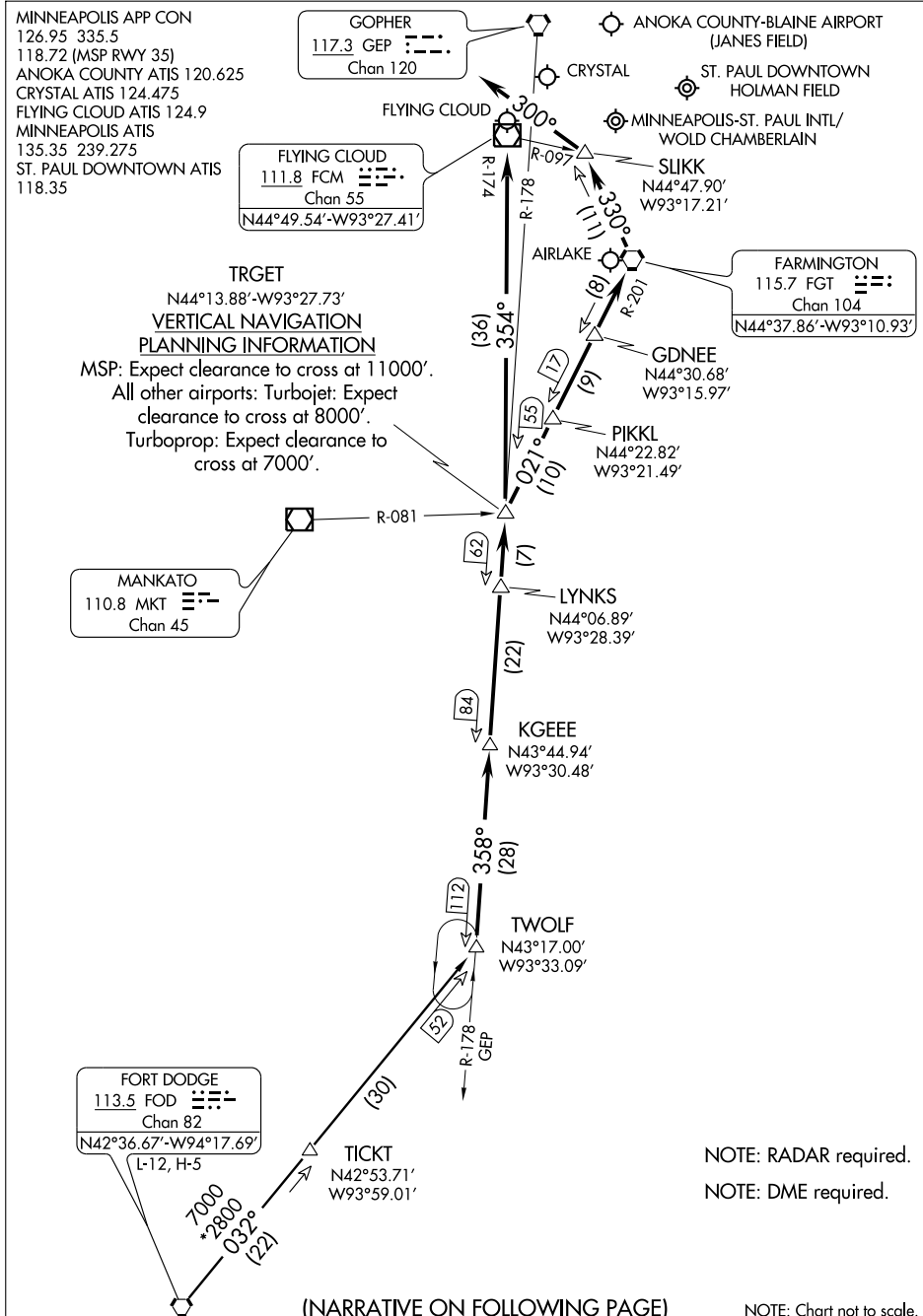
TAKE-OFF OBSTACLE NOTES

- RWY 9: Multiple trees beginning 1265' from DER, 167' right of centerline, up to 75' AGL/1055' MSL.
Multiple trees beginning 1.1 NM from DER, 124' left of centerline, up to 100' AGL/1099' MSL.
OL tank 1571' from DER, 771' right of centerline, 50' AGL/811' MSL.
Mobile crane 1163' from DER, 123' left of centerline, 50' AGL/758' MSL.
- RWY 13: OL stack 2695' from DER, 842' right of centerline, 50' AGL/820' MSL.
Tree 1563' from DER, 25' right of centerline, 61' AGL/748' MSL.
Multiple trees beginning 1004' from DER, 607' left of centerline, 50' AGL/767' MSL.
Tower 1725' from DER, 930' left of centerline, 47' AGL/753' MSL.
Vent on building 3029' from DER, 629' right of centerline, 10' AGL/783' MSL.
Multiple bushes beginning 194' from DER, 88' left of centerline, 7' AGL/712' MSL.
Stack 1879' from DER, 25' left of centerline, 51' AGL/751' MSL.
- RWY 14: Multiple trees beginning 805' from DER, 2' right of centerline, up to 112' AGL/811' MSL.
Multiple trees beginning 1205' from DER, 64' left of centerline, up to 80' AGL/770' MSL.
Poles 2810' from DER, 715' right of centerline, 91' AGL/778' MSL.
- RWY 27: Multiple trees beginning 803' from DER, 122' left of centerline, up to 100' AGL/994' MSL.
Tree 783' from DER, 105' right of centerline, 25' AGL/725' MSL.
OL antenna 996' from DER, 304' right of centerline, 67' AGL/767' MSL.
Light pole 1328' from DER, 222' left of centerline, 50' AGL/747' MSL.
Building 2049' from DER, 837' right of centerline, 57' AGL/761' MSL.
Flagpole 2333' from DER, 199' left of centerline, 78' AGL/778' MSL.
Stack 1.8 NM from DER, 635' left of centerline, 569' AGL/1279' MSL.
- RWY 32: Road and vehicle 211' from DER, 482' left of centerline, 17' AGL/717' MSL.
Railroad beginning 369' from DER, 329' left of centerline, up to 23' AGL/727' MSL.
Pipe on DME 383' from DER, 269' right of centerline, 17' AGL/722' MSL.
Tree 1152' from DER, 209' left of centerline, 44' AGL/744' MSL.
Tree 1685' from DER, 277' right of centerline, 75' AGL/770' MSL.
Sign 5668' from DER, 1924' left of centerline, 86' AGL/874' MSL.
Trees 5614' from DER, 1796' right of centerline, 100' AGL/939' MSL.
Building 5779' from DER, 1733' right of centerline, 72' AGL/910' MSL.
Pole 1 NM from DER, 1835' right of centerline, 157' AGL/973' MSL.
Building 1.1 NM from DER, 2170' left of centerline, 122' AGL/886' MSL.
Multiple buildings beginning 1.1 NM from DER, 378' left of centerline, up to 142' AGL/918' MSL.

TWOLF ONE ARRIVAL

ST-264 (FAA)

MINNEAPOLIS, MINNESOTA



ARRIVAL DESCRIPTION

FORT DODGE TRANSITION (FOD.TWOLF1): From over FOD VORTAC via FOD R-032 to TWOLF. Thence....

....From over TWOLF via GEP R-178 to KGEFF, then via GEP R-178 to TRGET INT, then via FGT R-201 to FGT VORTAC. Thence....

LANDING MSP RWYS 12L/R: From over FGT VORTAC via FGT R-330 to SLIKK, thence via 300° heading for radar vectors to final approach course.

LANDING MSP RWYS 30L/R, 4, 22, 17, 35: Via radar vectors to final approach course.

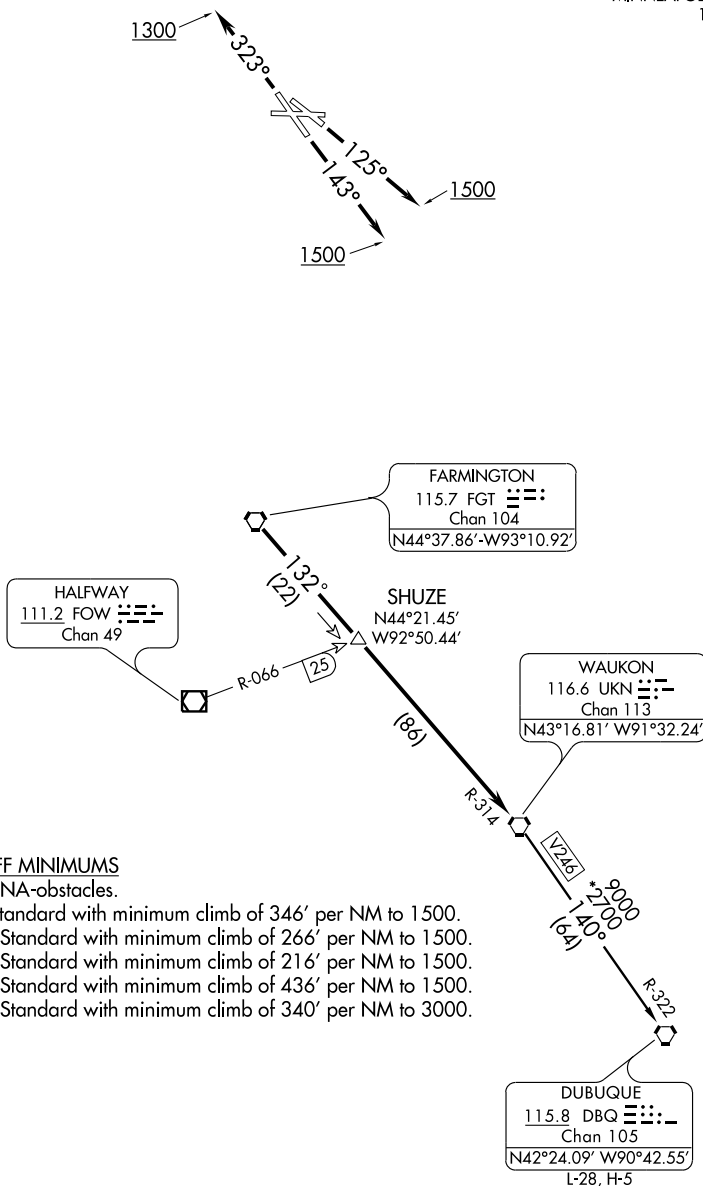
ALL OTHER AIRPORTS: From over TRGET INT via FCM VOR/DME R-174 to FCM VOR/DME then expect radar vectors to final approach course.

08157

WAUKON TWO DEPARTURE

ST. PAUL DOWNTOWN HOLMAN FIELD (STP)
SL-263 (FAA) ST. PAUL, MINNESOTA

ATIS	118.35
CLNC DEL	121.675
MINNEAPOLIS DEP CON	121.2 357.4



NOTE: RADAR required.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)

NC-1. 17 DEC 2009 to 14 JAN 2010



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 9, 27: Fly assigned heading and altitude for radar vectors to FGT VORTAC then via FGT R-132 and UKN R-314 to UKN VORTAC, thence....

TAKE-OFF RUNWAY 13: Climb heading 125° to 1500 for radar vectors to FGT VORTAC then via FGT R-132 and UKN R-314 to UKN VORTAC, thence....

TAKE-OFF RUNWAY 14: Climb heading 143° to 1500 for radar vectors to FGT VORTAC then via FGT R-132 and UKN R-314 to UKN VORTAC, thence....

TAKE-OFF RUNWAY 32: Climb heading 323° to 1300 for radar vectors to FGT VORTAC then via FGT R-132 and UKN R-314 to UKN VORTAC, thence....

....via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

DUBUQUE TRANSITION (UKN2.DBQ): From over UKN VORTAC via UKN R-140 and DBQ R-322 to DBQ VORTAC.

TAKE-OFF OBSTACLE NOTES

- RWY 9: Multiple trees beginning 1265' from DER, 167' right of centerline, up to 75' AGL/1055' MSL.
Multiple trees beginning 1.1 NM from DER, 124' left of centerline, up to 100' AGL/1099' MSL.
OL tank 1571' from DER, 771' right of centerline, 50' AGL/811' MSL.
Mobile crane 1163' from DER, 123' left of centerline, 50' AGL/758' MSL.
- RWY 13: OL stack 2695' from DER, 842' right of centerline, 50' AGL/820' MSL.
Tree 1563' from DER, 25' right of centerline, 61' AGL/748' MSL.
Multiple trees beginning 1004' from DER, 607' left of centerline, 50' AGL/767' MSL.
Tower 1725' from DER, 930' left of centerline, 47' AGL/753' MSL.
Vent on building 3029' from DER, 629' right of centerline, 10' AGL/783' MSL.
Multiple bushes beginning 194' from DER, 88' left of centerline, 7' AGL/712' MSL.
Stack 1879' from DER, 25' left of centerline, 51' AGL/751' MSL.
- RWY 14: Multiple trees beginning 805' from DER, 2' right of centerline, up to 112' AGL/811' MSL.
Multiple trees beginning 1205' from DER, 64' left of centerline, up to 80' AGL/770' MSL.
Poles 2810' from DER, 715' right of centerline, 91' AGL/778' MSL.
- RWY 27: Multiple trees beginning 803' from DER, 122' left of centerline, up to 100' AGL/994' MSL.
Tree 783' from DER, 105' right of centerline, 25' AGL/725' MSL.
OL antenna 996' from DER, 304' right of centerline, 67' AGL/767' MSL.
Light pole 1328' from DER, 222' left of centerline, 50' AGL/747' MSL.
Building 2049' from DER, 837' right of centerline, 57' AGL/761' MSL.
Flagpole 2333' from DER, 199' left of centerline, 78' AGL/778' MSL.
Stack 1.8 NM from DER, 635' left of centerline, 569' AGL/1279' MSL.
- RWY 32: Road and vehicle 211' from DER, 482' left of centerline, 17' AGL/717' MSL.
Railroad beginning 369' from DER, 329' left of centerline, up to 23' AGL/727' MSL.
Pipe on DME 383' from DER, 269' right of centerline, 17' AGL/722' MSL.
Tree 1152' from DER, 209' left of centerline, 44' AGL/744' MSL.
Tree 1685' from DER, 277' right of centerline, 75' AGL/770' MSL.
Sign 5668' from DER, 1924' left of centerline, 86' AGL/874' MSL.
Trees 5614' from DER, 1796' right of centerline, 100' AGL/939' MSL.
Building 5779' from DER, 1733' right of centerline, 72' AGL/910' MSL.
Pole 1 NM from DER, 1835' right of centerline, 157' AGL/973' MSL.
Building 1.1 NM from DER, 2170' left of centerline, 122' AGL/886' MSL.
Multiple buildings beginning 1.1 NM from DER, 378' left of centerline, up to 142' AGL/918' MSL.

WLSTN TWO DEPARTURE

ST. PAUL DOWNTOWN HOLMAN FIELD (STP)

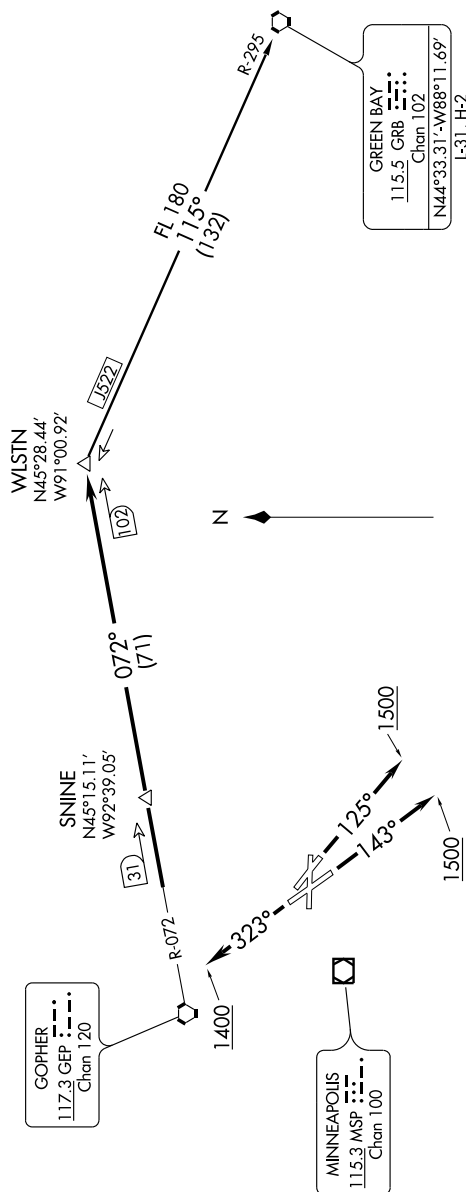
SL-263 (FAA)

ST. PAUL, MINNESOTA

ATIS 118.35
CLNC DEL
121.675
MINNEAPOLIS DEP CON
121.2 357.4

TAKE-OFF MINIMUMS

- Rwy 31: NA-obstacles.
Rwy 9: Standard with minimum climb of 346' per NM to 1500.
Rwy 13: Standard with minimum climb of 266' per NM to 1500.
Rwy 14: Standard with minimum climb of 216' per NM to 1500.
Rwy 27: Standard with minimum climb of 436' per NM to 1500.
Rwy 32: Standard with minimum climb of 340' per NM to 3000.



(NARRATIVE ON FOLLOWING PAGE)

WLSTN TWO DEPARTURE

ST. PAUL DOWNTOWN HOLMAN FIELD (STP)
SL-263 (FAA) ST. PAUL, MINNESOTA



DEPARTURE ROUTE DESCRIPTON

TAKE-OFF RUNWAYS 9, 27: Fly assigned heading and altitude for radar vectors to GEP R-072 to WLSTN/ GEP 102 DME, thence....

TAKE-OFF RUNWAY 13: Climb heading 125° to 1500 for radar vectors to GEP R-072 to WLSTN/ GEP 102 DME, thence....

TAKE-OFF RUNWAY 14: Climb heading 143° to 1500 for radar vectors to GEP R-072 to WLSTN/ GEP 102 DME, thence....

TAKE-OFF RUNWAY 32: Climb heading 323° to 1400 for radar vectors to GEP R-072 to WLSTN/ GEP 102 DME, thence....

....via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

GREEN BAY TRANSITION (WLSTN2.GRB): From over WLSTN INT via GRB R-295 to GRB VORTAC.

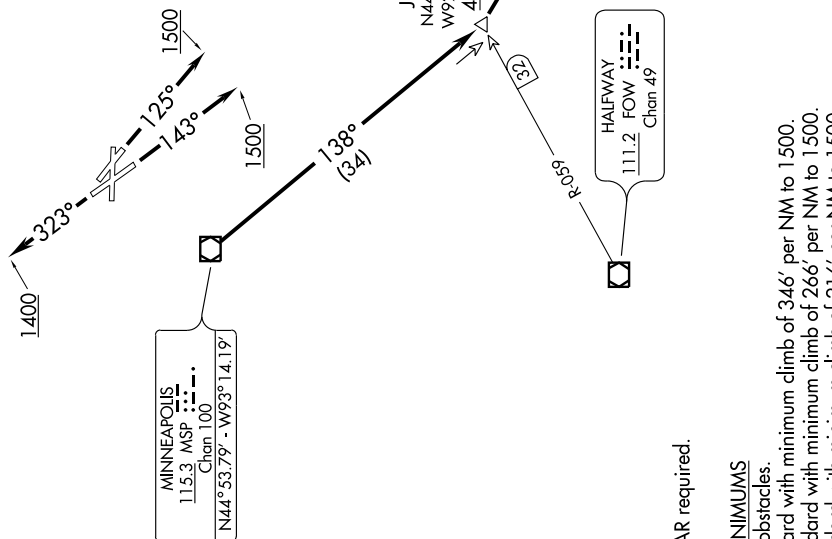
TAKE-OFF OBSTACLE NOTES

- RWY 9: Multiple trees beginning 1265' from DER, 167' right of centerline, up to 75' AGL/1055' MSL.
Multiple trees beginning 1.1 NM from DER, 124' left of centerline, up to 100' AGL/1099' MSL.
OL tank 1571' from DER, 771' right of centerline, 50' AGL/811' MSL.
Mobile crane 1163' from DER, 123' left of centerline, 50' AGL/758' MSL.
- RWY 13: OL stack 2695' from DER, 842' right of centerline, 50' AGL/820' MSL.
Tree 1563' from DER, 25' right of centerline, 61' AGL/748' MSL.
Multiple trees beginning 1004' from DER, 607' left of centerline, 50' AGL/767' MSL.
Tower 1725' from DER, 930' left of centerline, 47' AGL/753' MSL.
Vent on building 3029' from DER, 629' right of centerline, 10' AGL/783' MSL.
Multiple bushes beginning 194' from DER, 88' left of centerline, 7' AGL/712' MSL.
Stack 1879' from DER, 25' left of centerline, 51' AGL/751' MSL.
- RWY 14: Multiple trees beginning 805' from DER, 2' right of centerline, up to 112' AGL/811' MSL.
Multiple trees beginning 1205' from DER, 64' left of centerline, up to 80' AGL/770' MSL.
Poles 2810' from DER, 715' right of centerline, 91' AGL/778' MSL.
- RWY 27: Multiple trees beginning 803' from DER, 122' left of centerline, up to 100' AGL/994' MSL.
Tree 783' from DER, 105' right of centerline, 25' AGL/725' MSL.
OL antenna 996' from DER, 304' right of centerline, 67' AGL/767' MSL.
Light pole 1328' from DER, 222' left of centerline, 50' AGL/747' MSL.
Building 2049' from DER, 837' right of centerline, 57' AGL/761' MSL.
Flagpole 2333' from DER, 199' left of centerline, 78' AGL/778' MSL.
Stack 1.8 NM from DER, 635' left of centerline, 569' AGL/1279' MSL.
- RWY 32: Road and vehicle 211' from DER, 482' left of centerline, 17' AGL/717' MSL.
Railroad beginning 369' from DER, 329' left of centerline, up to 23' AGL/727' MSL.
Pipe on DME 383' from DER, 269' right of centerline, 17' AGL/722' MSL.
Tree 1152' from DER, 209' left of centerline, 44' AGL/744' MSL.
Tree 1685' from DER, 277' right of centerline, 75' AGL/770' MSL.
Sign 5668' from DER, 1924' left of centerline, 86' AGL/874' MSL.
Trees 5614' from DER, 1796' right of centerline, 100' AGL/939' MSL.
Building 5779' from DER, 1733' right of centerline, 72' AGL/910' MSL.
Pole 1 NM from DER, 1835' right of centerline, 157' AGL/973' MSL.
Building 1.1 NM from DER, 2170' left of centerline, 122' AGL/886' MSL.
Multiple buildings beginning 1.1 NM from DER, 378' left of centerline, up to 142' AGL/918' MSL.

ZMBRO TWO DEPARTURE

ST. PAUL DOWNTOWN HOLMAN FIELD (STP)
SL-263 (FAA) ST. PAUL, MINNESOTA

ATIS 118.35
CLNC DEL
121.675
MINNEAPOLIS DEP CON
121.2 357.4



NOTE: RADAR required.

TAKE-OFF MINIMUMS

Rwy 31: NA-obstacles.

Rwy 9: Standard with minimum climb of 346' per NM to 1500.

Rwy 13: Standard with minimum climb of 266' per NM to 1500.

Rwy 14: Standard with minimum climb of 216' per NM to 1500.

Rwy 27: Standard with minimum climb of 436' per NM to 1500.

Rwy 32: Standard with minimum climb of 340' per NM to 3000.

(NARRATIVE ON FOLLOWING PAGE)

NOTE: Chart not to scale.

ZMBRO TWO DEPARTURE

ST. PAUL DOWNTOWN HOLMAN FIELD (STP)

SL-263 (FAA)

ST. PAUL, MINNESOTA



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 9, 27: Fly assigned heading and altitude for radar vectors to MSP VOR/DME then via MSP R-138 to JEDET INT/MSP 34 DME, at or above 4000; then via ODI R-301 to ZMBRO INT/ODI 50 DME, thence....

TAKE-OFF RUNWAY 13: Climb heading 125° to 1500 for radar vectors to MSP VOR/DME then via MSP R-138 to JEDET INT/MSP 34 DME, at or above 4000; then via ODI R-301 to ZMBRO INT/ODI 50 DME, thence....

TAKE-OFF RUNWAY 14: Climb heading 143° to 1500 for radar vectors to MSP VOR/DME then via MSP R-138 to JEDET INT/MSP 34 DME, at or above 4000; then via ODI R-301 to ZMBRO INT/ODI 50 DME, thence....

TAKE-OFF RUNWAY 32: Climb heading 323° to 1400 for radar vectors to MSP VOR/DME then via MSP R-138 to JEDET INT/MSP 34 DME, at or above 4000; then via ODI R-301 to ZMBRO INT/ODI 50 DME, thence....

....via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

NODINE TRANSITION (ZMBRO2.ODI): From over ZMBRO INT via ODI R-301 to ODI VORTAC.

TAKE-OFF OBSTACLE NOTES

- RWY 9: Multiple trees beginning 1265' from DER, 167' right of centerline, up to 75' AGL/1055' MSL.
Multiple trees beginning 1.1 NM from DER, 124' left of centerline, up to 100' AGL/1099' MSL.
OL tank 1571' from DER, 771' right of centerline, 50' AGL/811' MSL.
Mobile crane 1163' from DER, 123' left of centerline, 50' AGL/758' MSL.
- RWY 13: OL stack 2695' from DER, 842' right of centerline, 50' AGL/820' MSL.
Tree 1563' from DER, 25' right of centerline, 61' AGL/748' MSL.
Multiple trees beginning 1004' from DER, 607' left of centerline, 50' AGL/767' MSL.
Tower 1725' from DER, 930' left of centerline, 47' AGL/753' MSL.
Vent on building 3029' from DER, 629' right of centerline, 10' AGL/783' MSL.
Multiple bushes beginning 194' from DER, 88' left of centerline, 7' AGL/712' MSL.
Stack 1879' from DER, 25' left of centerline, 51' AGL/751' MSL.
- RWY 14: Multiple trees beginning 805' from DER, 2' right of centerline, up to 112' AGL/811' MSL.
Multiple trees beginning 1205' from DER, 64' left of centerline, up to 80' AGL/770' MSL.
Poles 2810' from DER, 715' right of centerline, 91' AGL/778' MSL.
- RWY 27: Multiple trees beginning 803' from DER, 122' left of centerline, up to 100' AGL/994' MSL.
Tree 783' from DER, 105' right of centerline, 25' AGL/725' MSL.
OL antenna 996' from DER, 304' right of centerline, 67' AGL/767' MSL.
Light pole 1328' from DER, 222' left of centerline, 50' AGL/747' MSL.
Building 2049' from DER, 837' right of centerline, 57' AGL/761' MSL.
Flagpole 2333' from DER, 199' left of centerline, 78' AGL/778' MSL.
Stack 1.8 NM from DER, 635' left of centerline, 569' AGL/1279' MSL.
- RWY 32: Road and vehicle 211' from DER, 482' left of centerline, 17' AGL/717' MSL.
Railroad beginning 369' from DER, 329' left of centerline, up to 23' AGL/727' MSL.
Pipe on DME 383' from DER, 269' right of centerline, 17' AGL/722' MSL.
Tree 1152' from DER, 209' left of centerline, 44' AGL/744' MSL.
Tree 1685' from DER, 277' right of centerline, 75' AGL/770' MSL.
Sign 5668' from DER, 1924' left of centerline, 86' AGL/874' MSL.
Trees 5614' from DER, 1796' right of centerline, 100' AGL/939' MSL.
Building 5779' from DER, 1733' right of centerline, 72' AGL/910' MSL.
Pole 1 NM from DER, 1835' right of centerline, 157' AGL/973' MSL.
Building 1.1 NM from DER, 2170' left of centerline, 122' AGL/886' MSL.
Multiple buildings beginning 1.1 NM from DER, 378' left of centerline, up to 142' AGL/918' MSL.

NDB SAZ
257

APP CRS
133°

Rwy Idg	3304
TDZE	1287
Apt Elev	1287

NDB or GPS RWY 14

STAPLES MUNI (SAZ)



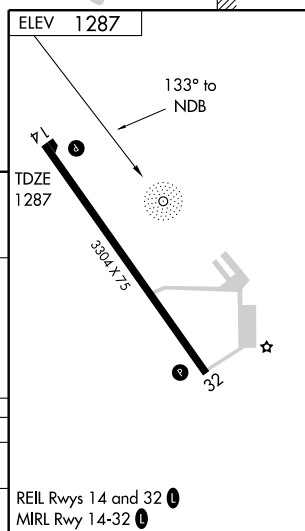
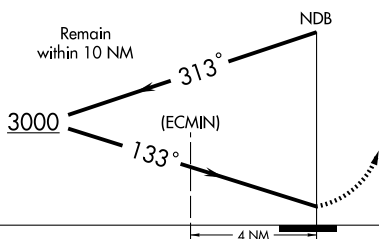
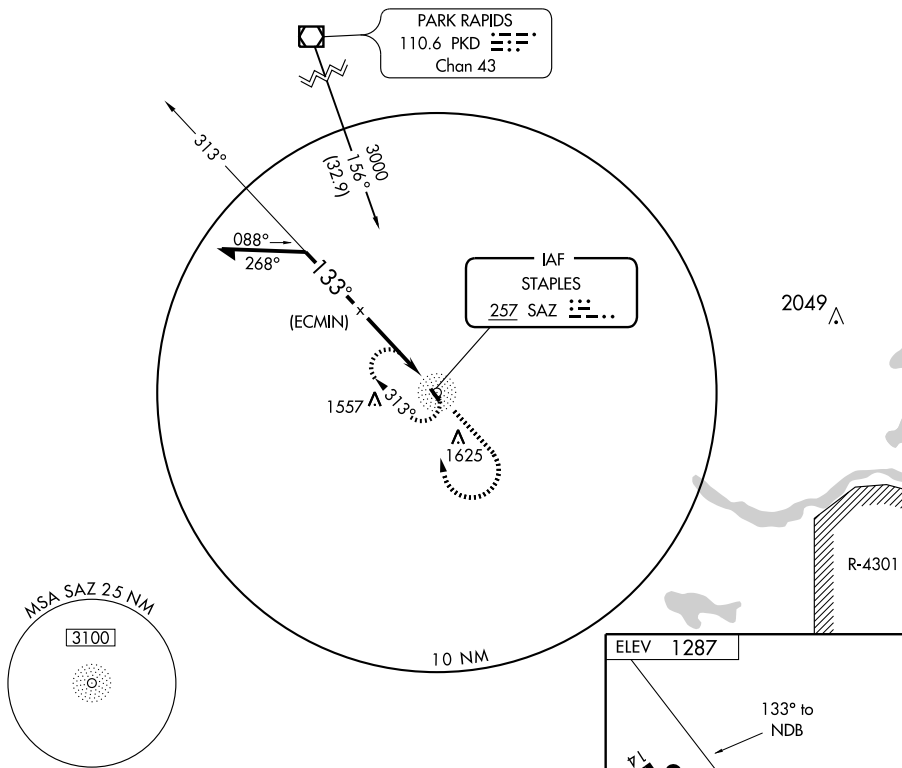
A NA

MISSED APPROACH: Climb to 3000 then right turn direct SAZ NDB and hold.

AWOS-3
118,325

MINNEAPOLIS CENTER
118.05 239.0

GCO
121,725

CTAF
122.90

CATEGORY	A	B	C	D
S-14	1820-1	533 (600-1)	1820-1½ 533 (600-1½)	NA
CIRCLING	1820-1	533 (600-1)	1940-1¾ 653 (700-1¾)	NA

▼

▲ NA

When local altimeter setting not received, use Crookston altimeter setting and increase all DA 82 feet, and all MDA 100 feet and increase S-LOC Cat C/D visibility ¼ mile. For inoperative MALSRS when using Crookston altimeter setting, increase visibility S-ILS 31 all Cats to 1 mile. Circling to Rwy 3/21 NA.

MALSRS

MISSED APPROACH: Climb to 2700 then left turn direct TVF VOR/DME and hold.

AWOS-3 108.4	MINNEAPOLIS CENTER 132.15 269.6	UNICOM 122.8 (CTAF) 0
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ALTERNATE MISSED APCH FIX

MSA HY 25 NM

ELEV 1119

D

FAF to MAP 4.5 NM

Knots	60	90	120	150	180
Min:Sec	4:30	3:00	2:15	1:48	1:30

ADF or DME REQUIRED

2700

↑

TVF

108.4

LOM TVF 5.3

2605

130°

2700

310°

2700

GS 3.00°

TCH 55

One Minute Holding Pattern

CATEGORY	A	B	C	D
S-ILS 31	1315-½ 200 (200-½)			
S-LOC 31	1480-½ 365 (400-½)			1480-¾ 365 (400-¾)
CIRCLING	1540-1 421 (500-1)	1580-1 461 (500-1)	1580-1½ 461 (500-1½)	1680-2 561 (600-2)

NC-1. 17 DEC 2009 to 14 JAN 2010

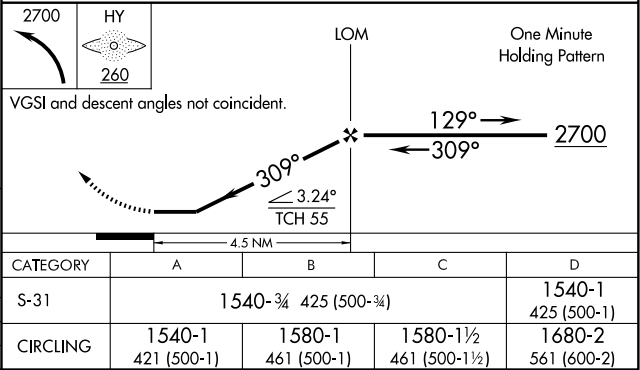
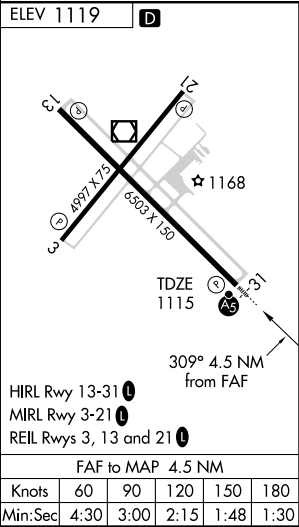
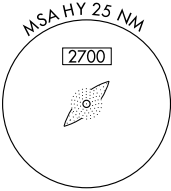
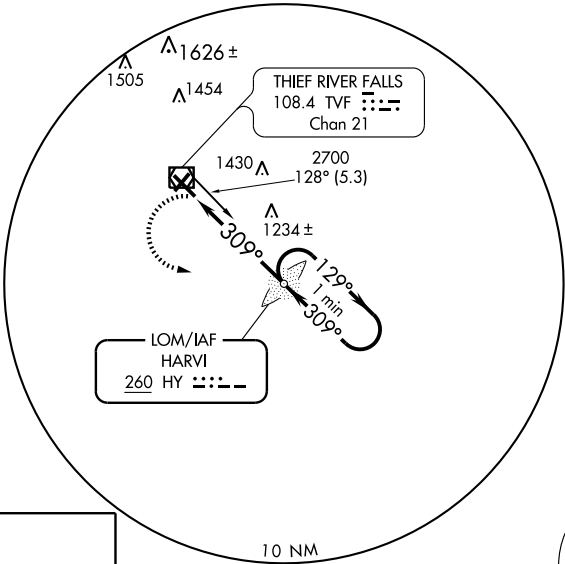
LOM HY	APP CRS	Rwy Idg	6503
260	309°	TDZE	1115
		Apt Elev	1119

NA Circling to Rwy 3/21 NA.
When local altimeter setting not received, use Crookston altimeter setting and increase all MDA 100 feet and increase S-31 Cat C visibility ¼ mile and Cat D visibility ½ mile.



MISSED APPROACH: Climbing left turn to 2700 direct HY LOM and hold.

AWOS-3 108.4	MINNEAPOLIS CENTER 132.15 269.6	UNICOM 122.8 (CTAF) 1
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WAAS CH 72711 W13A	APP CRS 130°	Rwy Idg TDZE Apt Elev 6503 1115 1119
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RNAV (GPS) RWY 13

THIEF RIVER FALLS RGNL (TVF)

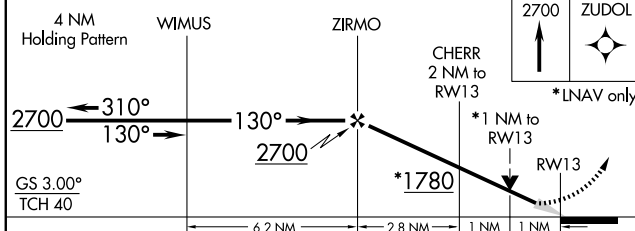
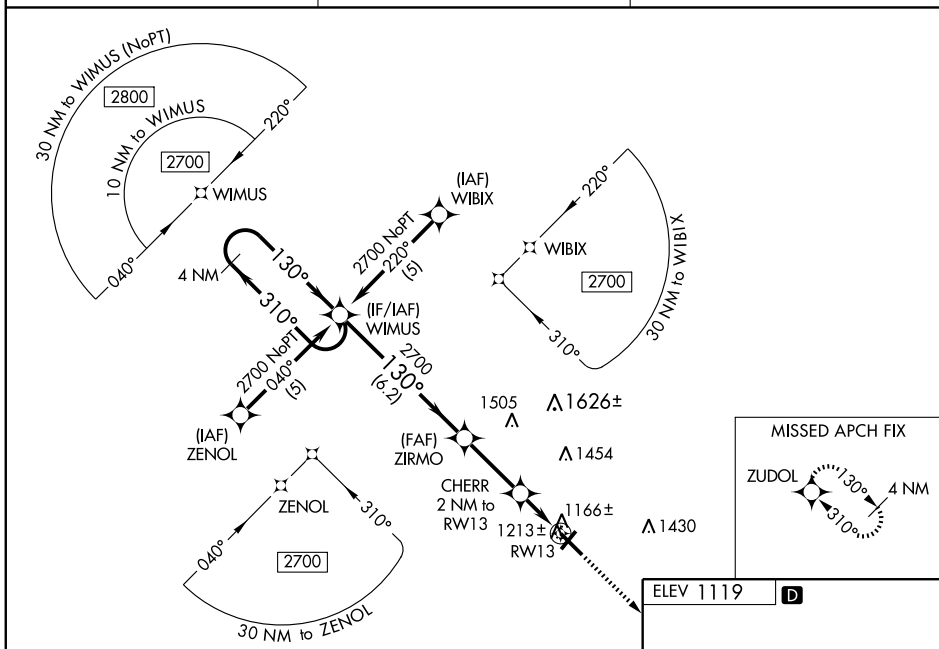
⚠ For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). DME/DME RNP-0.3 NA.
⚠ When local altimeter setting not received, use Crookston altimeter setting and increase all DA 82 feet, and all MDA 100 feet and LPV and LNAV/VNAV all Cats and LNAV Cats C and D visibilities ¼ mile.
 VDP and Baro-VNAV NA when using Crookston altimeter setting.
 Circling to Rwy 3/21 NA.

MISSED APPROACH: Climb to 2700
direct ZUDOL and hold.

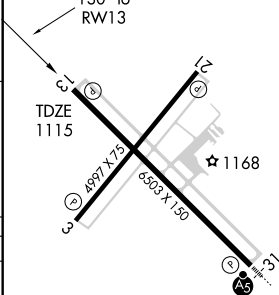
AWOS-3
108.4

MINNEAPOLIS CENTER
132.15 269.6

UNICOM
122.8 (CTAF) 0



CATEGORY	A	B	C	D
LPV DA	1365-1	250 (300-1)		
LNAV/VNAV DA	1436-1¼	321 (400-1¼)		
LNAV MDA	1480-1	365 (400-1)	1480-1¼	365 (400-1¼)
CIRCLING	1540-1 421 (500-1)	1580-1 461 (500-1)	1580-1½ 461 (500-1½)	1680-2 561 (600-2)



HIRL Rwy 13-31 **0**
 MRL Rwy 3-21 **0**
 REIL Rws 3, 13 and 21 **0**

WAAS CH 69311 W31A	APP CRS 310°	Rwy Idg 6503 TDZE 1115 Apt Elev 1119
--	------------------------	---

RNAV (GPS) RWY 31

THIEF RIVER FALLS RGNL(TVF)

- ▼** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). DME/DME RNP-0.3 NA.
- ▲** When local altimeter setting not received, use Crockston altimeter setting and increase all DA 82 feet, and all MDA 100 feet and LPV all Cats, LNAV/VNAV Cats A, B, and C and LNAV Cat C visibilities ¼ mile.
- For inoperative MALS when using Crockston altimeter setting, increase visibility LPV all Cats to 1 ¼ mile.
- For inoperative MALS increase visibility LNAV/VNAV Cat D to 1 mile and increase visibility LNAV Cat D to 1 ¼ mile.
- VDP and Baro-VNAV NA when using Crockston altimeter setting.
- Circling to Rwy 3/21 NA.


MALSR



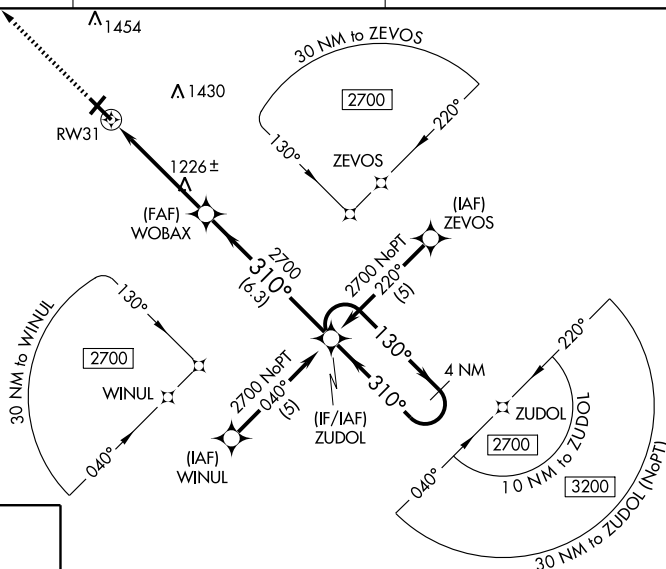
MISSED APPROACH: Climb to 2700 direct WIMUS and hold.

AWOS-3
108.4

MINNEAPOLIS CENTER
132.15 269.6

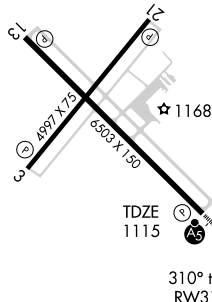
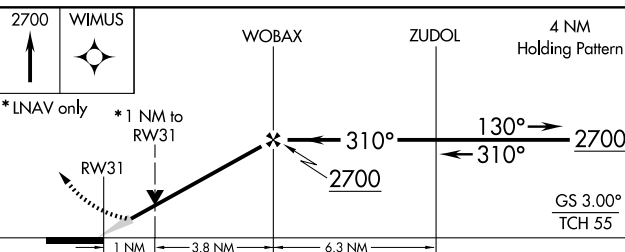
UNICOM
122.8 (CTAF) 

MISSED APCH FIX

 $\Delta 1544$ 

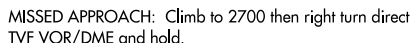
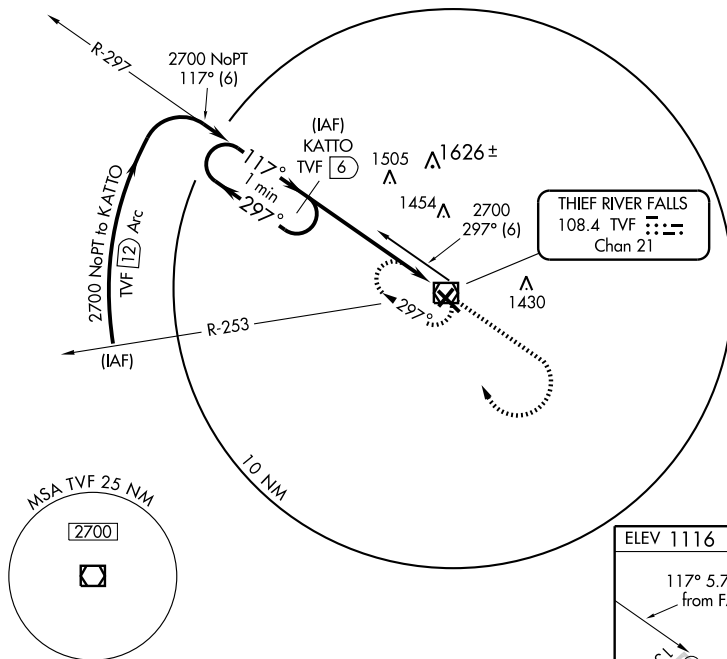
NC-1. 17 DEC 2009 to 14 JAN 2010

ELEV 1119

HIRL Rwy 13-31 **L**MIRL Rwy 3-21 REIL Rwys 3, 13 and 21 **L**

CATEGORY		A	B	C	D
LPV	DA	1365- $\frac{1}{2}$ 250 (300- $\frac{1}{2}$)			
LNAV/ VNAV	DA	1427- $\frac{1}{2}$	312 (400- $\frac{1}{2}$)	1427- $\frac{3}{4}$ 312 (400- $\frac{3}{4}$)	
LNAV	MDA	1500- $\frac{1}{2}$ 385 (400- $\frac{1}{2}$)			1500-1 385 (400-1)
CIRCLING		1540-1 421 (500-1)	1580-1 461 (500-1)	1580-1 $\frac{1}{2}$ 461 (500-1 $\frac{1}{2}$)	1680-2 561 (600-2)

THIEF RIVER FALLS RGNL (TVF)

UNICOM
122.8 (CTAF) **L**

TVF

 108.4

$$\frac{2700}{117^\circ} \leftarrow 297^\circ$$

TV

VOR/DME

TVF |

— 4,5 NM —

1.2 NM

CATEGORY

A

B

C

D

S-13

1520

406 (500-1)

1520-

406 (500-1 1/4)

1540-1

1580

1580-1

	1680-2
--	--------

HIRL Rwy 13-31 **L**MIRL Rwy 3-21

REIL Rwy 3, 13 and 21 L

VOR/DME TVF	APP CRS	Rwy Idg	6503
108.4	312°	TDZE	1113
Chan 21		Apt Elev	1116

VOR/DME RWY 31

THIEF RIVER FALLS RGNL (TVF^o)



Increase S-31 Cat D visibility ¼ mile for inoperative MALSR.
Circling to Rwy 3/21 NA.

MALSR

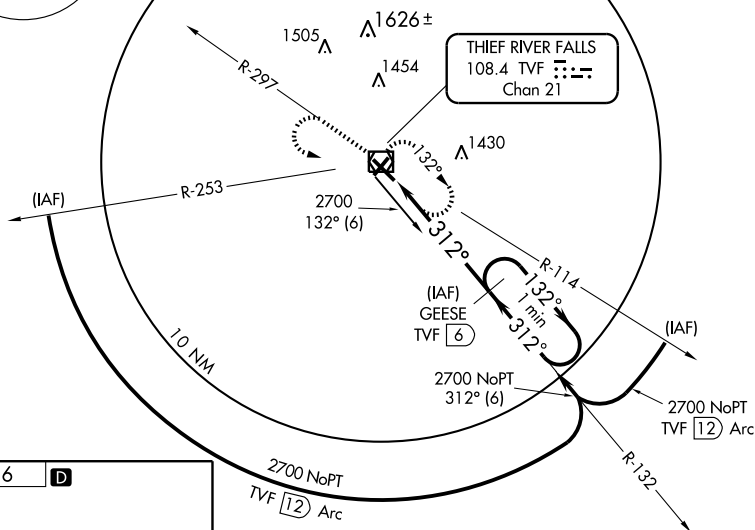
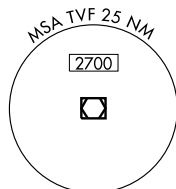


MISSED APPROACH: Climb to 2700 via TVF R-297
then left turn direct TVF VOR/DME and hold.

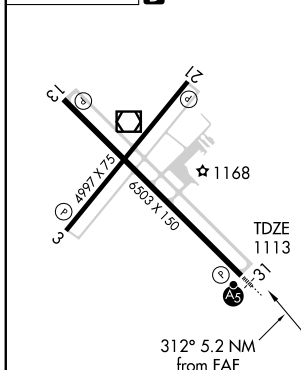
AWOS-3
108.4

MINNEAPOLIS CENTER
132.15 269.6

UNICOM
122.8 (CTAF) 0



ELEV 1116 D



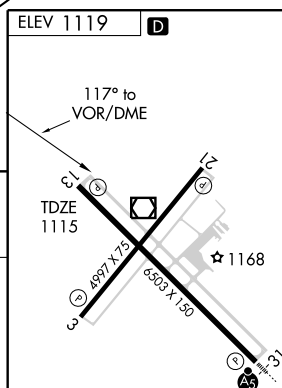
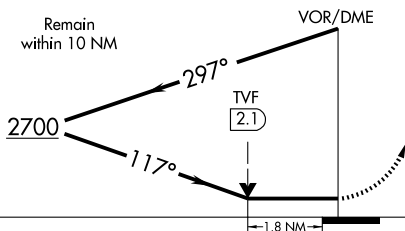
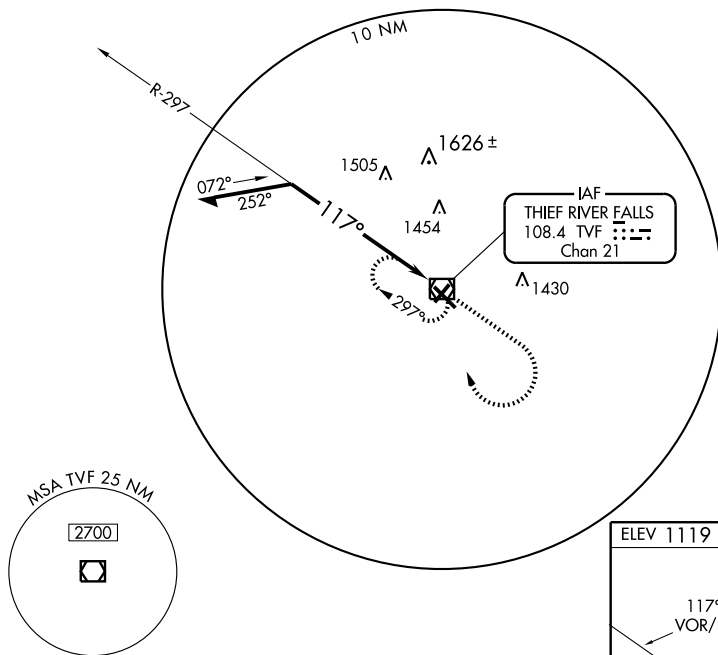
HIRL Rwy 13-31 0

MIRL Rwy 3-21 0

REIL Rwy 3, 13 and 21 0

CATEGORY	A		B		C		D	
	S-31		1480-½ 367 (400-½)		1480-1 367 (400-1)		1480-1 367 (400-1)	
CIRCLING	1540-1 424 (500-1)		1580-1 464 (500-1)		1580-1½ 464 (500-1½)		1680-2 564 (600-2)	

MISSED APPROACH: Climb to 2700 then right turn direct TVF VOR/DME and hold.

UNICOM
122.8 (CTAF) **L**

CATEGORY	A	B	C	D
S-13	1740-1 625 (700-1)		1740-1 3/4 625 (700-1 3/4)	1740-2 625 (700-2)
CIRCLING	1740-1 621 (700-1)		1740-1 3/4 621 (700-1 3/4)	1740-2 621 (700-2)

HIRL Rwy 13-31 **L**
MIRL Rwy 3-21 **L**
REIL Rwy 3, 13 and 21 **L**

VOR/DME TVF 108.4 Chan 21	APP CRS 312°	Rwy Idg 6503 TDZE 1113 Apt Elev 1116
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VOR RWY 31
THIEF RIVER FALLS RGNL (TVF)

T Circling to Rwy 3/21 NA.

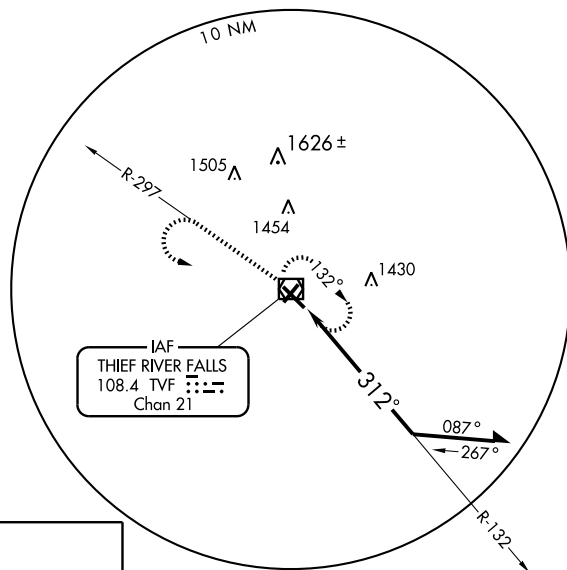
MALSR

MISSED APPROACH: Climb to 2700 via TVF R-297 then left turn direct TVF VOR/DME and hold.

AWOS-3
108.4

MINNEAPOLIS CENTER
132.15 269.6

UNICOM
122.8 (CTAF) **L**

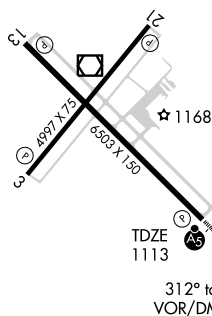


MSA TVF 25 NM

2700

ELEV 1116

D

HIRL Rwy 13-31 **L**MIRL Rwy 3-21 **L**

REIL Rwys 3, 13 and 21 L

2700
↑
TVF R-297

TVF	
	
108.4	

VOR/DME

Remain
within 10 NM

2700

CATEGORY	A	B	C	D
S-31	1540-½ 427 (500-½)		1540-¾ 427 (500-¾)	1540-1 427 (500-1)
CIRCLING	1540-1 424 (500-1)	1580-1 464 (500-1)	1580-1½ 464 (500-1½)	1680-2 564 (600-2)

▼

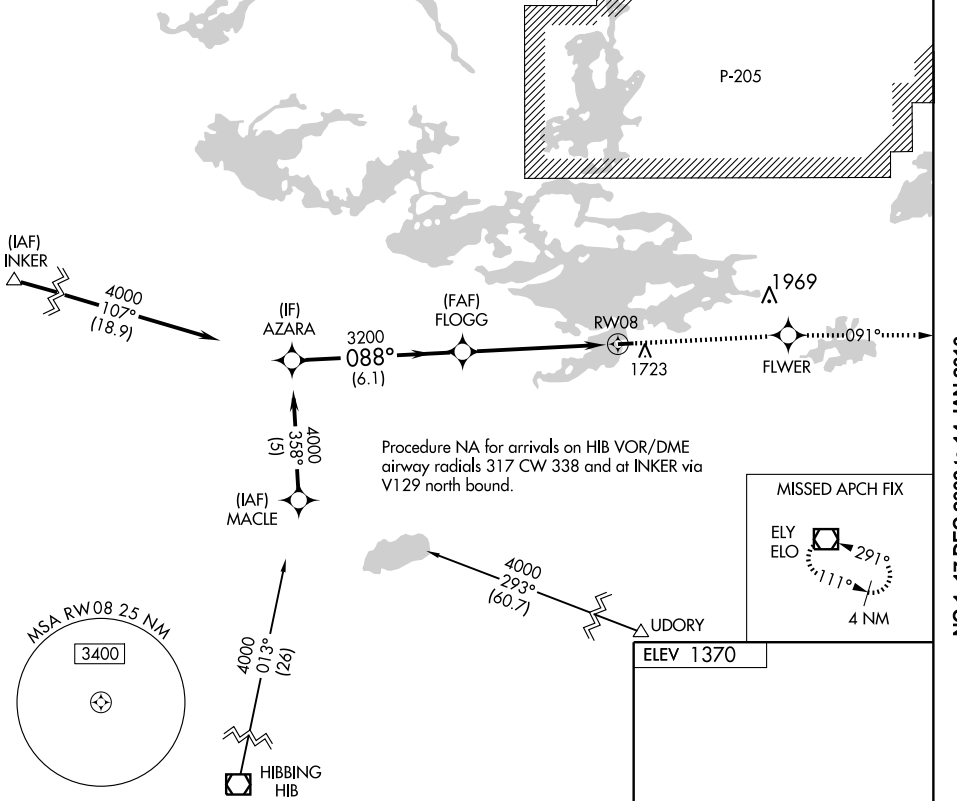
DME/DME RNP-0.3 NA. Procedure NA at night.

▲NA

Use Cook altimeter setting, when not received, use Ely altimeter setting and increase all MDA 20 feet and increase LNAV Cat C visibility ¼ mile.

MISSED APPROACH: Climb to 4000 direct FLWER and via 091° track to ELO VOR/DME and hold.

COOK AWOS-3 118.175	MINNEAPOLIS CENTER 127.9 281.45	CTAF 122.9
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<div> <div>4000</div> <div>FLWER</div> <div>091° track</div> <div>ELO</div> </div>				
<div> <div>088°</div> <div>3200</div> <div>3.05° TCH 40</div> <div>RW08</div> </div>				
<div> <div>6.1 NM</div> <div>5.6 NM</div> </div>				
CATEGORY	A	B	C	D
LNAV MDA	1960-1	591 (600-1)	1960-1½ 591 (600-1½)	NA
CIRCLING	2120-1 750 (800-1)	2120-1¼ 750 (800-1¼)	2120-2¼ 750 (800-2¼)	NA
<div> <div>088° to RW08</div> <div>TDZE 1369</div> <div>3400 X 75</div> <div>26</div> </div>				
MIRL Rwy 8-26				

▼

NA

DME/DME RNP- 0.3 NA. Procedure NA at night.

Visibility reduction by helicopters NA.

Use Cook altimeter setting, when not received, use Ely altimeter setting and increase all MDA 20 feet and increase Cat B and C visibility ¼ mile.

MISSED APPROACH: Climbing left turn to 4000 direct KUMDE and hold.

COOK AWOS-3

118.175

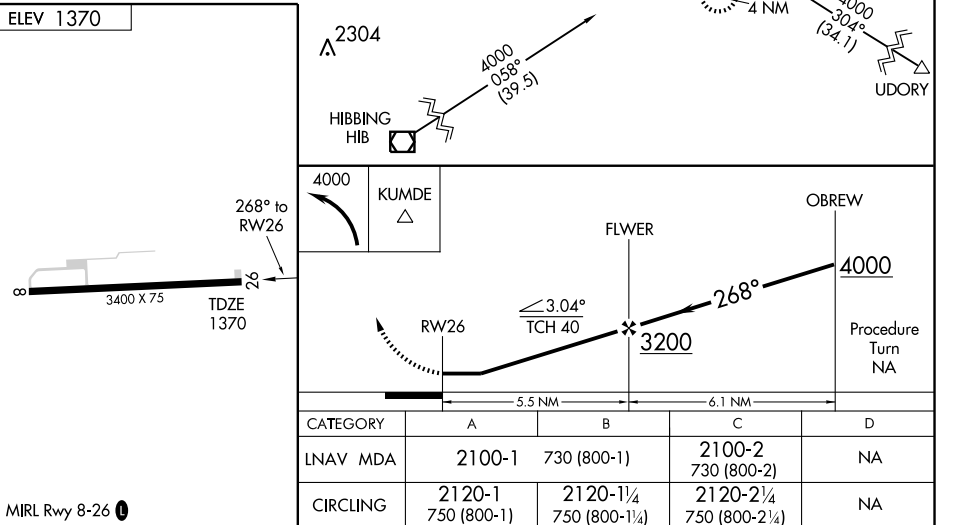
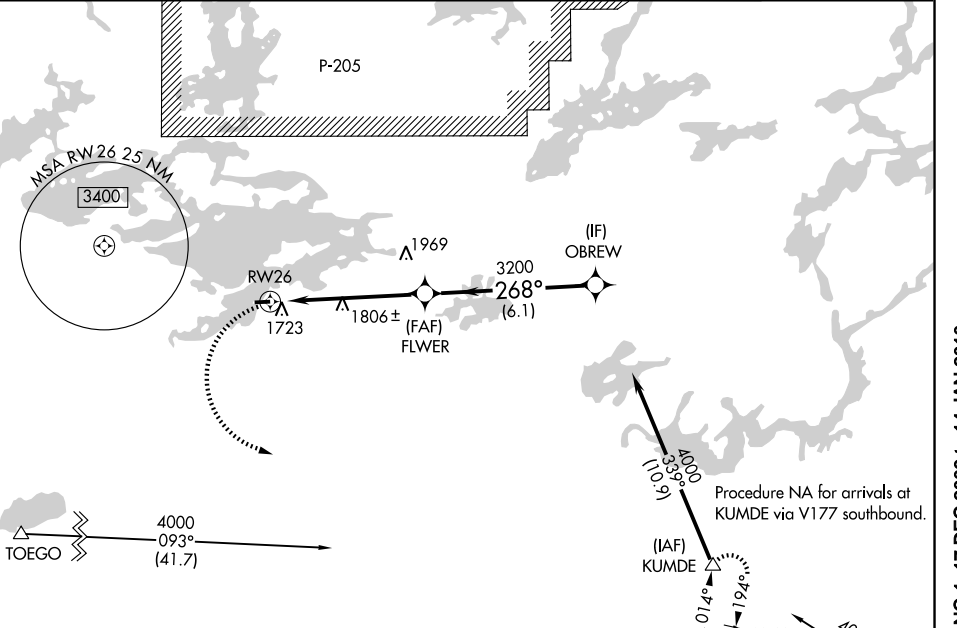
MINNEAPOLIS CENTER

127.9 281.45

CTAF

122.9

0



APP CRS 114°	Rwy Idg TDZE Apt Elev	3100 1336 1340
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RNAV (GPS) RWY 11
TRACY MUNI (TKC)

TRACY MUNI (TKC)

ANA

DME/DME RNP- 0.3 NA.

If local altimeter setting not received, use Marshall/Ryan altimeter setting and increase all MDAs 60 feet.
Procedure NA at night.

MISSED APPROACH: Climb to 3000 direct DUPPA and hold.

AWOS-3

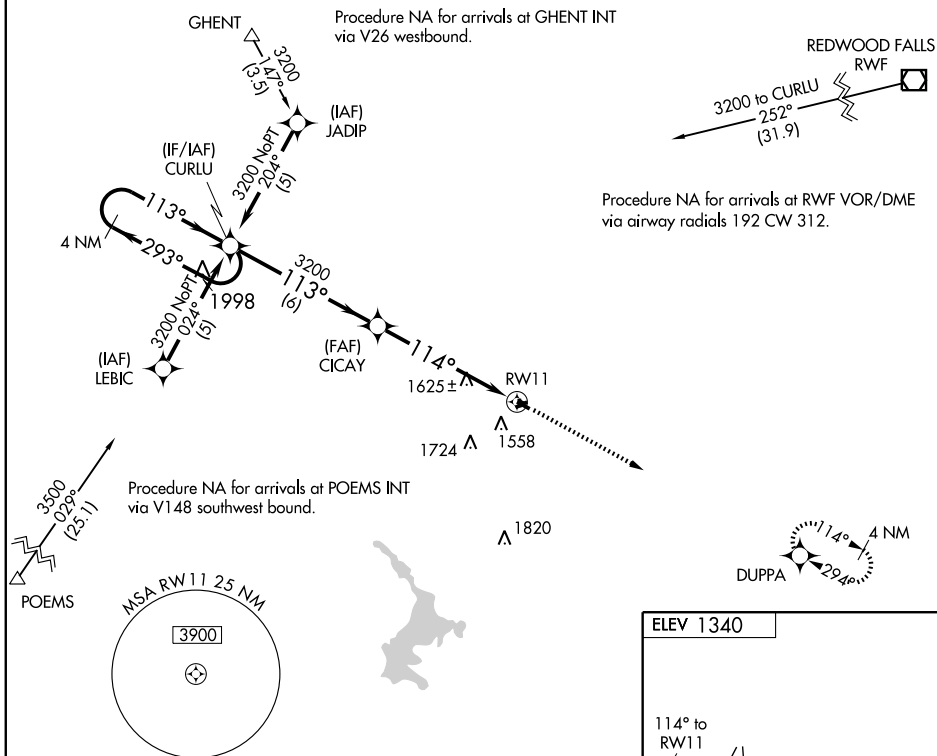
120.0

MINNEAPOLIS CENTER

127.1 290.2

CTAF

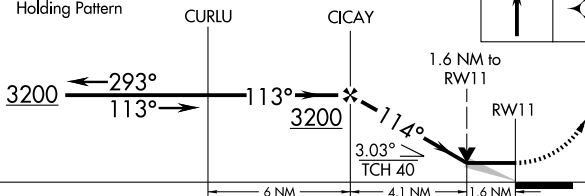
122.9 L



4 NM
Holding Pattern

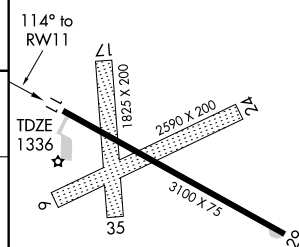
3000

DUPPA



CATEGORY	A	B	C	D
LNAV MDA	1900-1	564 (600-1)	NA	
CIRCLING	1960-1	620 (700-1)	NA	

ELEV 1340

MIRL Rwy 11-29 **L**

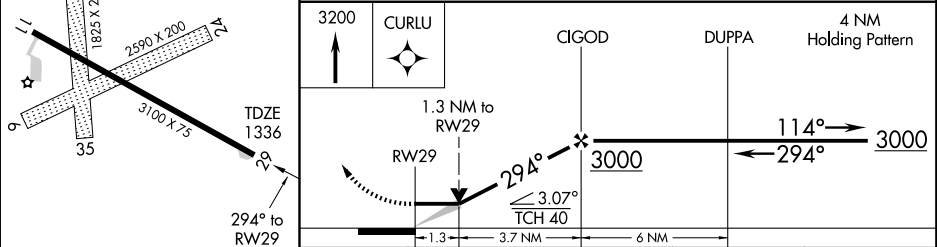
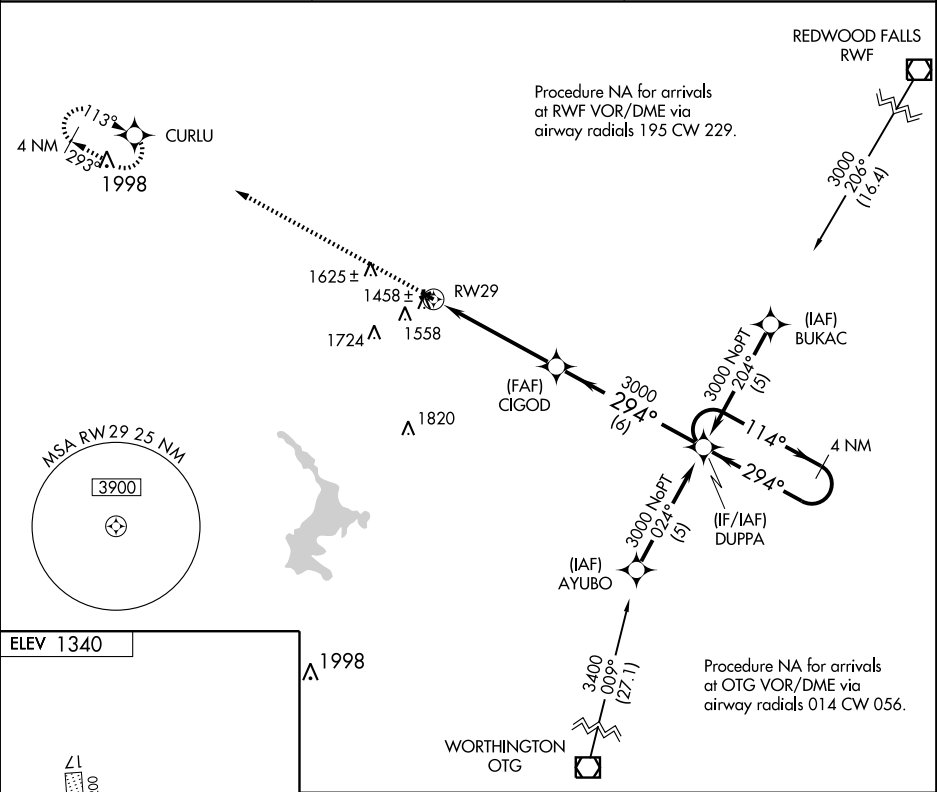
APP CRS	Rwy Idg	3100
294°	TDZE	1336
	Apt Elev	1340

RNAV (GPS) RWY 29

TRACY MUNI (TKC)

<p>NA</p> <p>DME/DME RNP- 0.3 NA. If local altimeter setting not received, use Marshall/Ryan altimeter setting and increase all MDAs 60 feet. Procedure NA at night.</p>	<p>MISSED APPROACH: Climb to 3200 direct CURLU and hold.</p>
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AWOS-3 120.0	MINNEAPOLIS CENTER 127.1 290.2	CTAF 122.9 0
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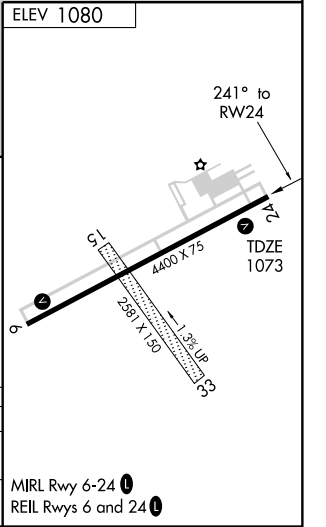
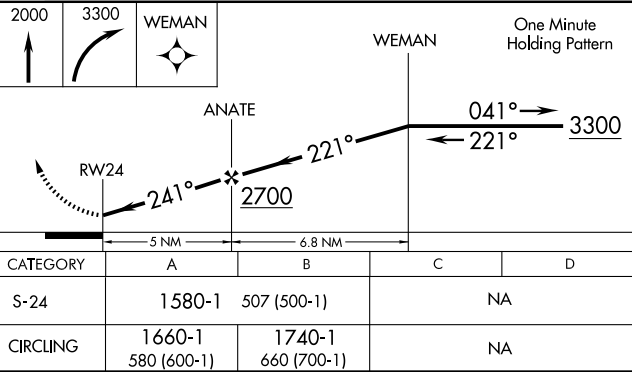
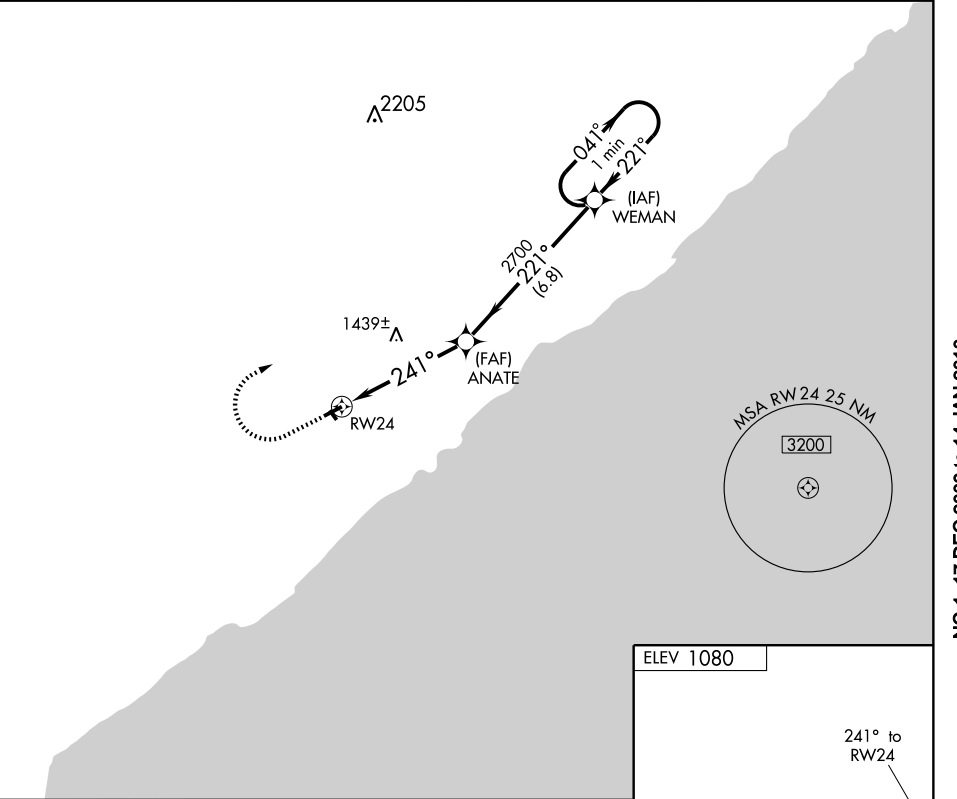


CATEGORY	A	B	C	D
LNAV MDA	1780-1	444 (500-1)	NA	
CIRCLING	1920-1	580 (600-1)	NA	

NA

MISSED APPROACH: Climb to 2000 then climbing right turn to 3300 direct WEMAN WP and hold.

AWOS-3 119.325	DULUTH APP CON★ 125.45 255.9	GCO 121.725	CTAF 122.9 0
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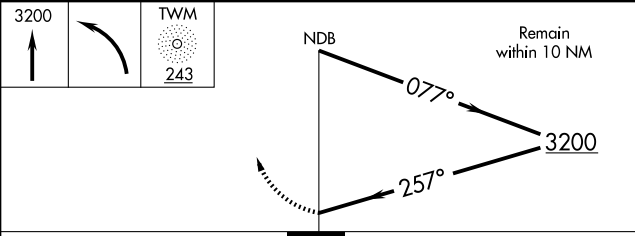
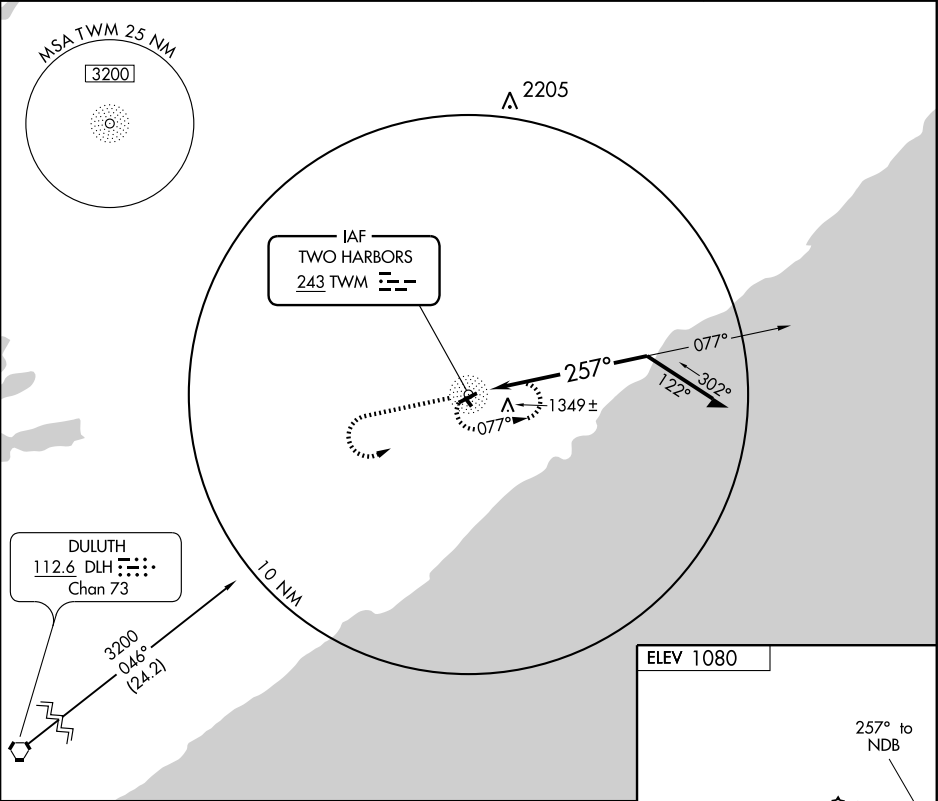


NDB RWY 24

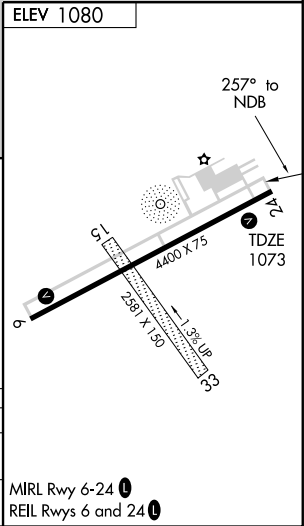
TWO HARBORS/RICHARD B HELGESON (TWM)

NDB TWM	APP CRS	Rwy Idg	4400
243	257°	TDZE	1073
		Apt Elev	1080

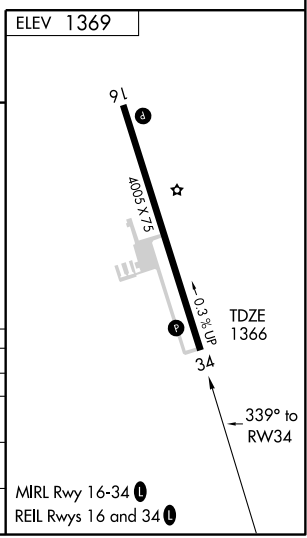
NA		MISSED APPROACH: Climb to 3200 then left turn direct TWM NDB and hold.	
AWOS-3	DULUTH APP CON ★	GCO	CTAF
119.325	125.45 255.9	121.725	122.9 0



CATEGORY	A	B	C	D
S-24	1700-1	627 (700-1)	NA	
CIRCUING	1700-1 620 (700-1)	1740-1 660 (700-1)	NA	



NA GPS or RNP- 0.3 required. DME/DME RNP- 0.3 NA.		MISSED APPROACH: Climb to 2100 then climbing left turn to 3300 direct UJWA WP and hold.	
AWOS-3 128.325	MINNEAPOLIS CENTER 126.1 269.2	GCO 121.725	UNICOM 122.8 (CTAF) 0



APP CRS
306°

Rwy Idg	3205
TDZE	885
Apt Elev	886

RNAV (GPS) RWY 30

WARREN MUNI (D37)



Use Crookston Muni-Kirkwood Field altimeter setting.

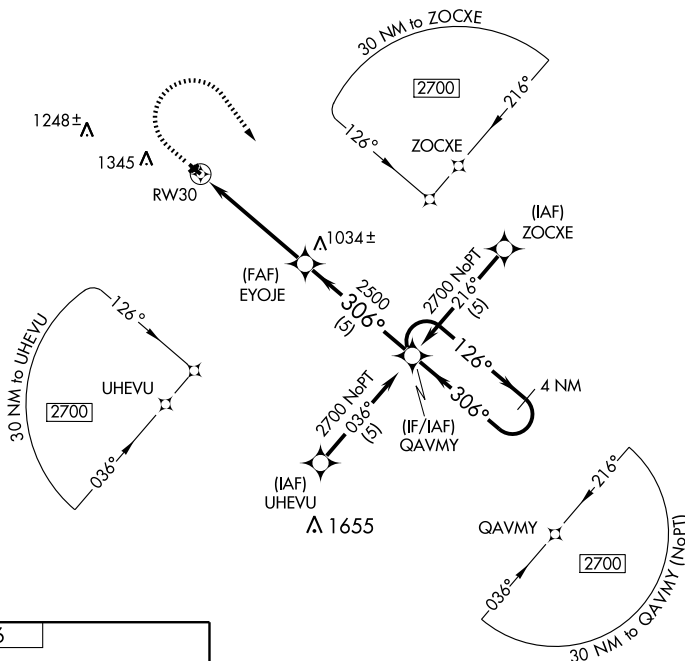


GPS or RNP -0.3 required. DME/DME RNP- 0.3 NA.

MISSED APPROACH: Climb to 2000, then climbing right turn to 2700 direct QAVMY WP and hold.

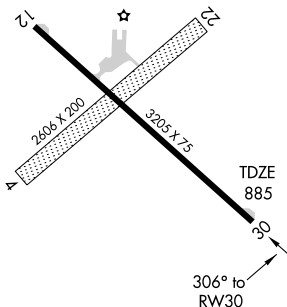
GRAND FORKS APP CON
118.1 318.1

UNICOM
122.8 (CTAF)

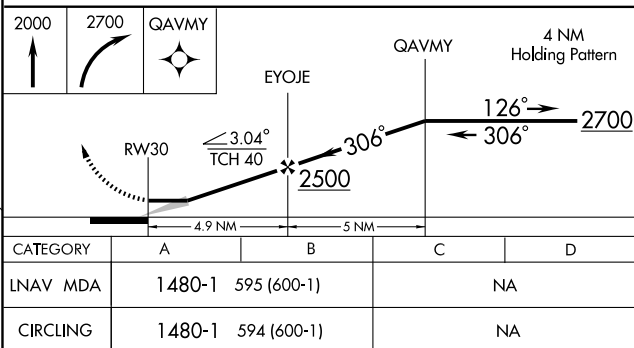


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ELEV 886



MIRL Rwy 12-30

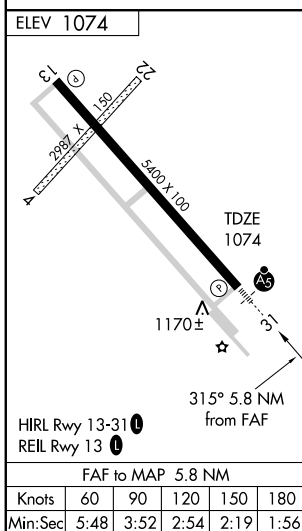
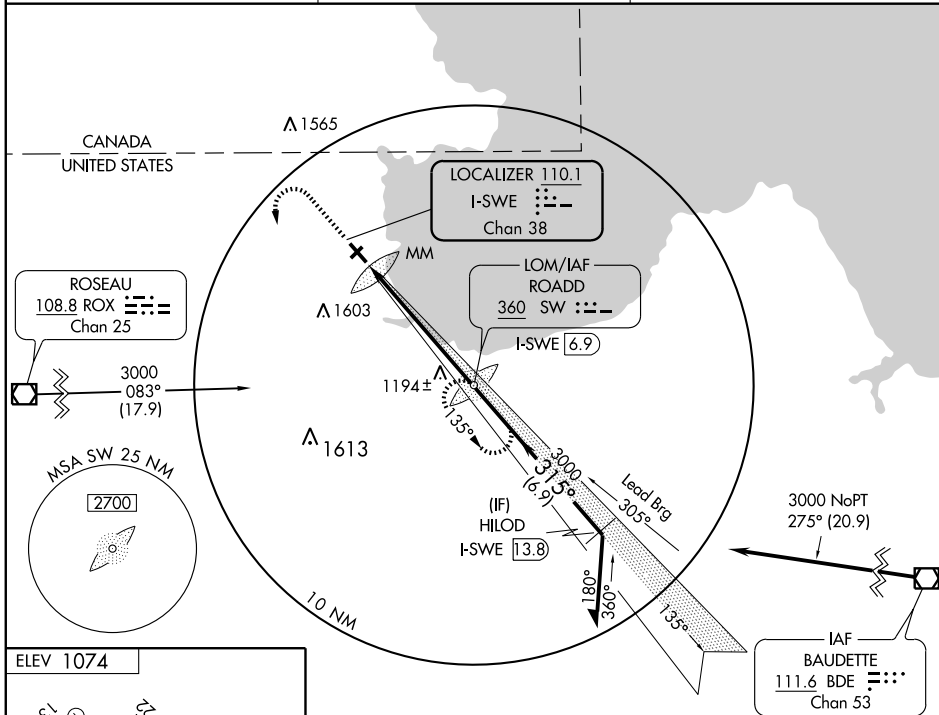


LOC/DME I-SWE 110.1 Chan 38	APP CRS 315°	Rwy Idg TDZE Apt Elev 5400 1074 1074
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ILS or LOC RWY 31

WARROAD INTL MEMORIAL (R.R.T)

NA		MISSED APPROACH: Climb to 3000 then left turn direct ROADD LOM and hold.
AWOS-3 119.925	MINNEAPOLIS CENTER 134.75 251.1	UNICOM 123.05 (CTAF) 0



ADF or DME REQUIRED

3000	SW	LOM	Remain within 10 NM			
3000	I-SWE 1.1	I-SWE 6.9	3000	135°	3000	315°
0.5	5.3 NM	3000	GS 3.00°	TCH 40		
CATEGORY	A	B	C	D		
S-ILS 31	1274-½		200 (200-½)			
S-LOC 31	1460-½		386 (400-½)		1460-¾ 386 (400-¾)	
CIRCLING	1500-1	1540-1	1540-1½	1640-2		
	426 (500-1)	466 (500-1)	466 (500-1½)	566 (600-2)		

LOM SW	APP CRS	Rwy Idg	5400
<u>360</u>	315°	TDZE	1074
		Apt Elev	1074

NDB RWY 31

WARROAD INTL MEMORIAL (RRT)

T When local altimeter setting not received, use Rosea
A NA altimeter setting and increase all MDAs 40 feet and
increase S-31 Cat C visibility $\frac{1}{4}$ mile.

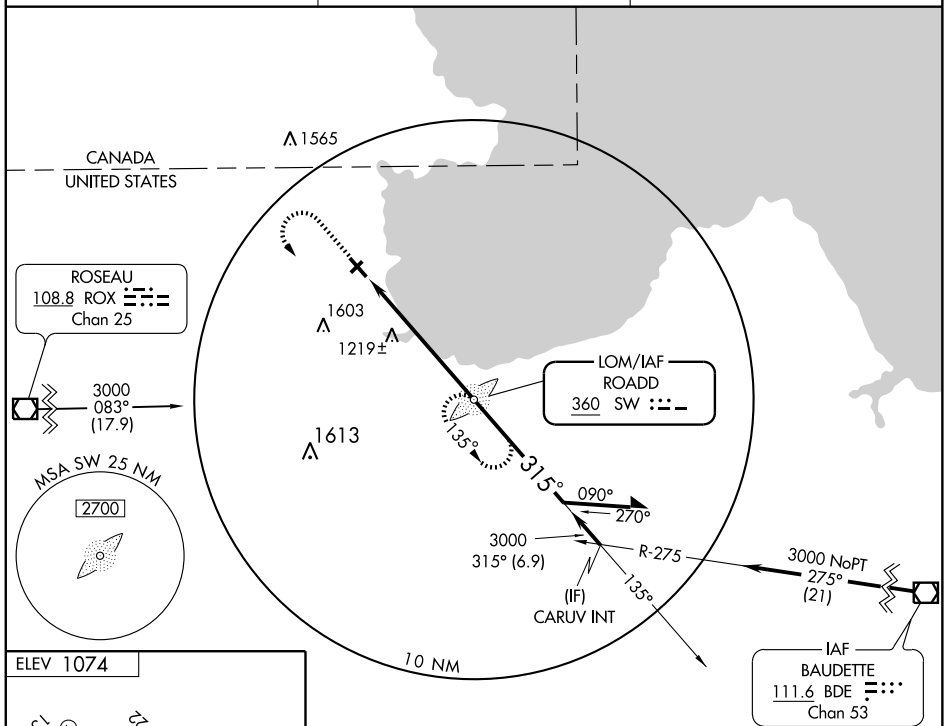
MALSR
A5

MISSED APPROACH: Climb to 3000 then left turn direct
ROADD LOM and hold.

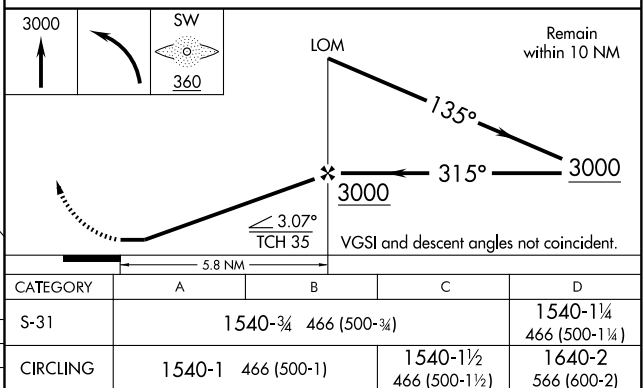
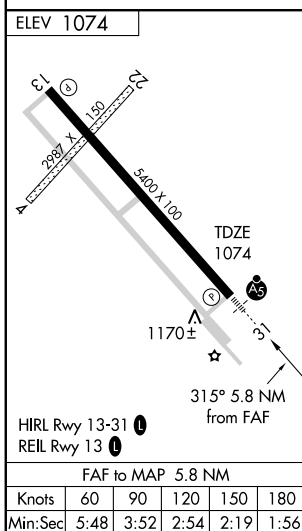
AWOS-3
119.925

MINNEAPOLIS CENTER
134.75 251.1

UNICOM
123.05 (CTAF) **L**



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APP CRS	Rwy Idg	5400
135°	TDZE	1073
	Apt Elev	1074

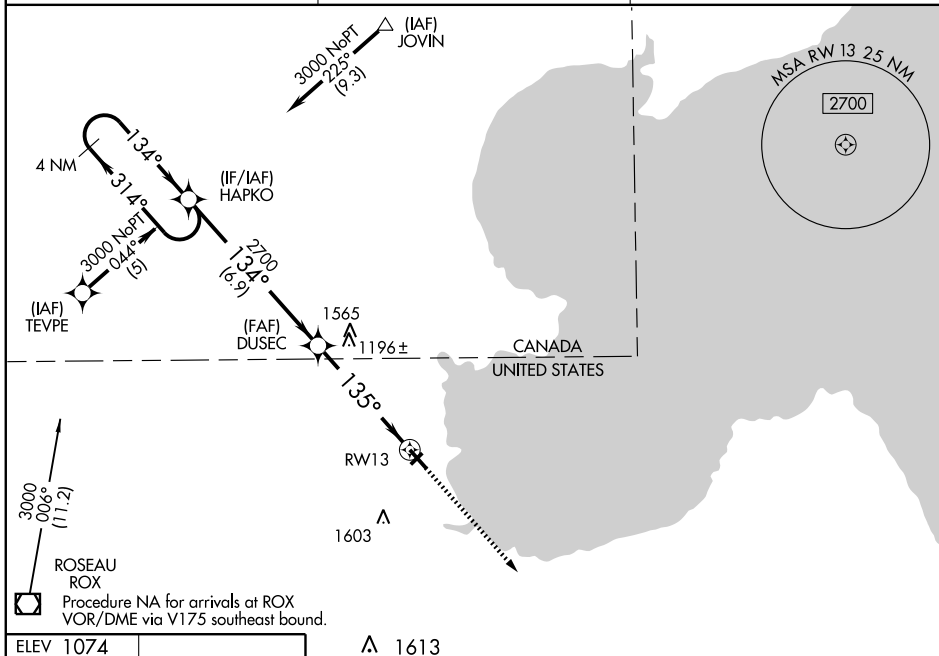
RNAV (GPS) RWY 13
WARROAD INTL MEMORIAL (RRT)

- T** DME/DME RNP-0.3 NA.
- A** When local altimeter setting not received, use Roseau altimeter setting and increase all MDAs 40 feet, and LNAV Cat C and D visibilities ¼ mile. VDP NA when using Roseau altimeter setting.

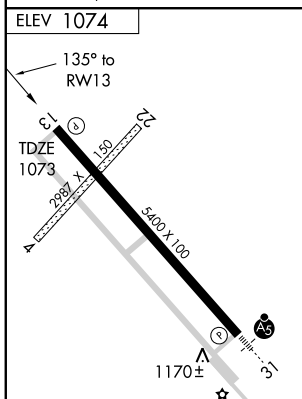
MISSED APPROACH: Climb to 3000 direct EPAME and hold.

AWOS-3
119.925

MINNEAPOLIS CENTER
134.75 251.1

UNICOM
123.05 (CTAF) **L**

NC-1. 17 DEC 2009 to 14 JAN 2010



HIRL Rwy 13-31 **L**
REIL Rwy 13 **L**

4 NM Holding Pattern

HAPKO

DUSEC

3000

2700

134°

134°

135°

6.9 NM

3.5 NM

1.4 NM

VGSI and descent angles not coincident.

3000

EPAME

1.4 NM to RW13

3.04° TCH 45

RW13

Baro-VNAV NA when using Roseau altimeter setting. DME/DME RNP-0.3 NA. When local altimeter setting not received, use Roseau altimeter setting and increase all DAs 36 feet and all MDAs 40 feet and increase, LNAV/VNAV all Cats and LNAV Cat D visibilities ¼ mile. VDP NA when using Roseau altimeter setting. For inoperative MALSR when using Roseau altimeter setting increase LPV all Cats visibility to 1 mile. For uncompensated Baro-VNAV systems, LNAV-VNAV NA below -17°C (2°F) or above 47°C (116°F).

MALSR

MISSED APPROACH: Climb to 3000 direct HAPKO and hold.

AWOS-3 119.925	MINNEAPOLIS CENTER 134.75 251.1	UNICOM 123.05 (CTAF) 0
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MISSED APCH FIX

ROSEAU ROX

MSA RW31 25 NM

BAUDETTE BDE

ELEV 1074

Procedure NA for arrivals at ROX VOR/DME via V175 northbound and arrivals at BDE VOR/DME via V217 southeast bound.

3000 HAPKO

VGSI and RNAV glidepath not coincident.
* LNAV only

DULPE

EPAME

4 NM Holding Pattern

GS 3.00° TCH 45°

CATEGORY	A	B	C	D
LPV DA	1324-1/2		250 (300-1/2)	
LNAV/VNAV DA	1449-3/4		375 (400-3/4)	
LNAV MDA	1480-1/2 406 (500-1/2)		1480-3/4 406 (500-3/4)	1480-1 406 (500-1)
CIRCLING	1500-1 426 (500-1)	1540-1 466 (500-1)	1540-1 1/2 466 (500-1 1/2)	1640-2 566 (600-2)

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NDB ACQ 371	APP CRS 160°	Rwy Idg TDZE Apt Elev 3398 1126 1126
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NDB RWY 15

WASECA MUNI (ACQ)

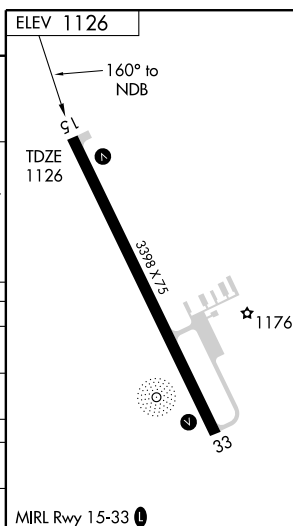
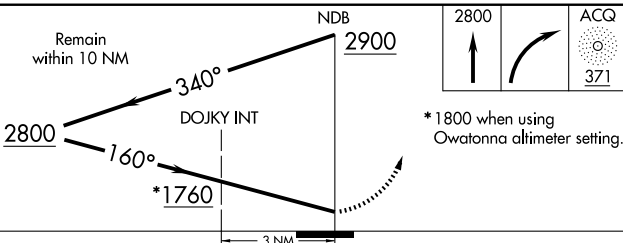
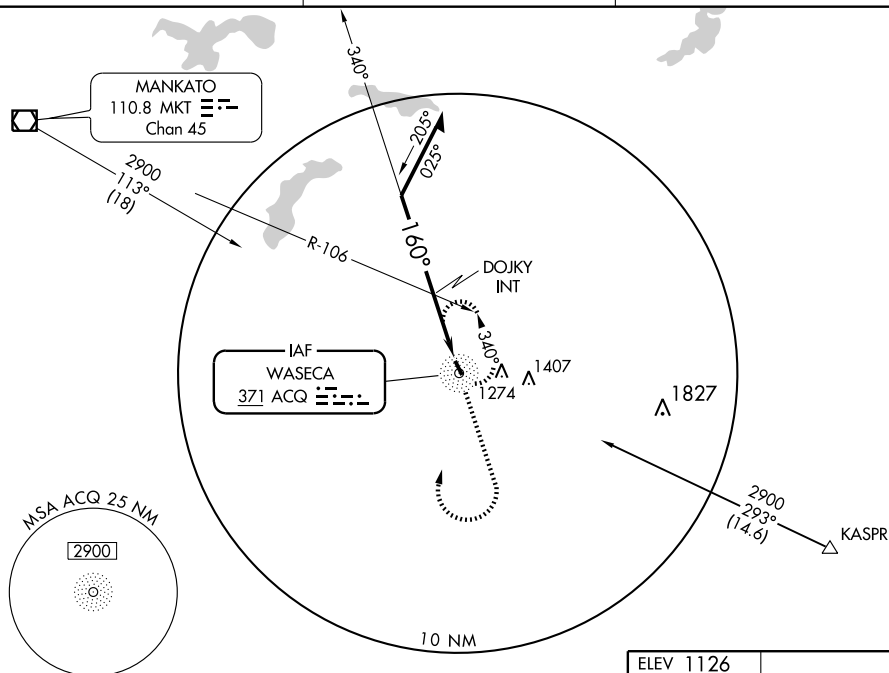
NA When local altimeter setting not received, use Owatonna altimeter setting and increase all MDA 40 feet and increase all Cat C visibilities ¼ mile.

MISSED APPROACH: Climb to 2800 then right turn direct ACQ NDB and hold.

AWOS-3
371

MINNEAPOLIS CENTER
132.35 307.3

UNICOM
122.8 (CTAF)



CATEGORY	A	B	C	D
S-15	1760-1	634 (700-1)	1760-1¾ 634 (700-1¾)	NA
CIRCLING	1760-1	634 (700-1)	1760-1¾ 634 (700-1¾)	NA
DOJKY FIX MINIMUMS				
S-15	1720-1	594 (600-1)	1720-1½ 594 (600-1½)	NA
CIRCLING	1720-1	594 (600-1)	1720-1½ 594 (600-1½)	NA

RNAV (GPS) RWY 15

WASECA MUNI (ACQ)

APP CRS	Rwy Idg	3398
152°	TDZE	1126
	Apt Elev	1126

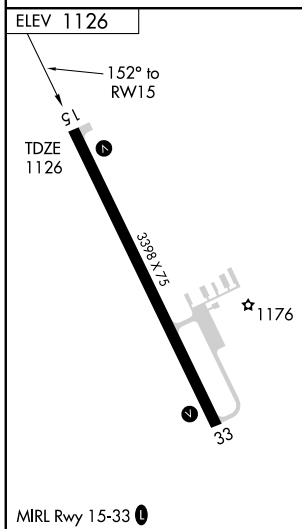
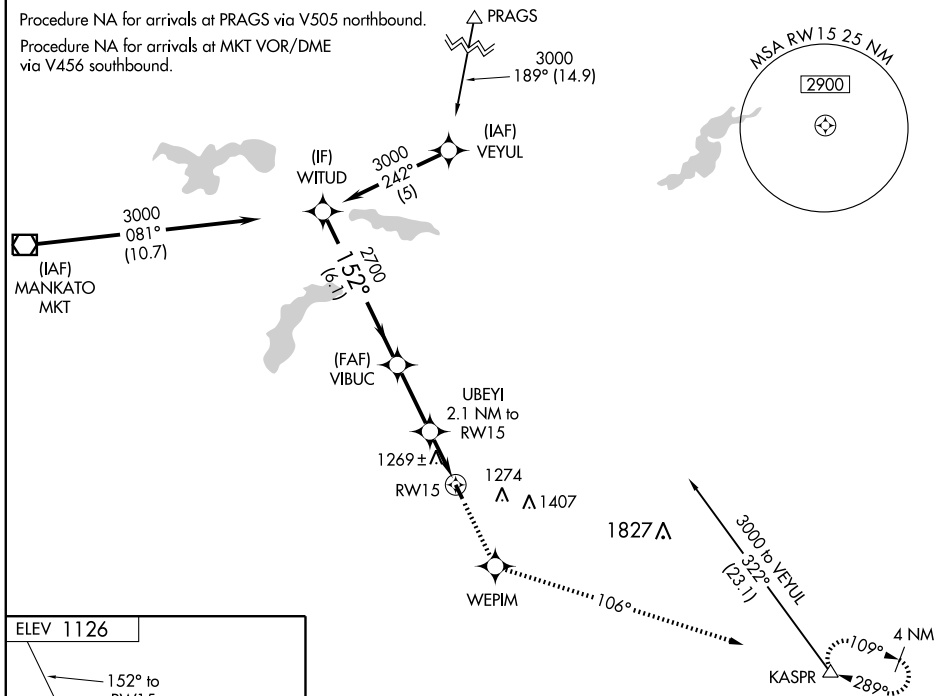
- T** DME/DME RNP-0.3 NA.
- A** VDP NA when using Owatonna altimeter setting.
When local altimeter setting not received, use Owatonna altimeter setting and increase all MDA 40 feet and LNAV Cat. C visibility ¼ mile.

MISSED APPROACH: Climb to 3000 direct WEPM and via 106° track to KASPR and hold.

AWOS-3 371	MINNEAPOLIS CENTER 132.35 307.3	UNICOM 122.8 (CTAF) 0
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Procedure NA for arrivals at PRAGS via V505 northbound.

Procedure NA for arrivals at MKT VOR/DME via V456 southbound.



Procedure NA for arrivals at KASPR via V24-398 eastbound and V13-V411 southbound.

VGSI and descent angles not coincident.

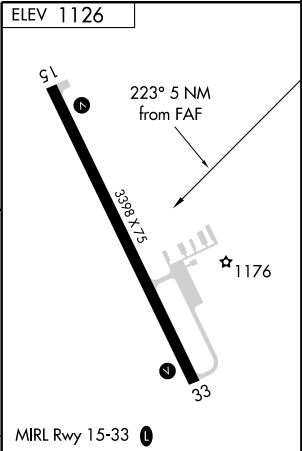
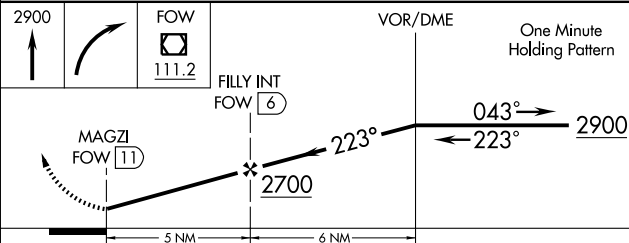
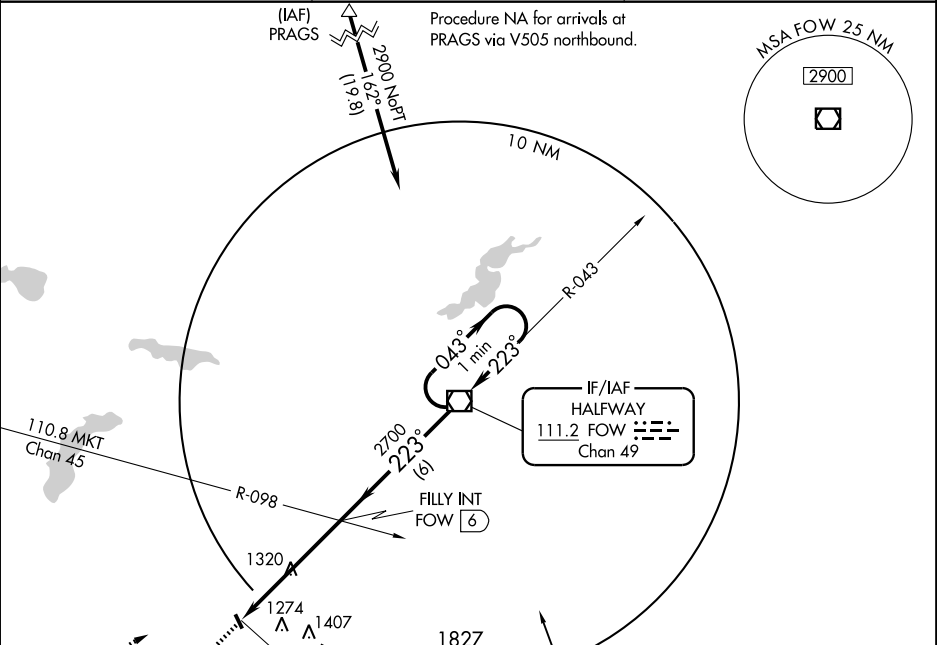
	WITUD	VIBUC	UBEY 2.1 NM to RW15	WEPM	106° track	KASPR
Procedure Turn NA	3000	2700	1840			
	6.1 NM	2.7 NM	0.7	1.4 NM		
CATEGORY	A	B	C	D		
LNAV MDA	1580-1	1640-1	1660-1½	534 (600-1½)	NA	
CIRCLING	454 (500-1)	514 (600-1)	534 (600-1½)		NA	

VOR/DME FOW	APP CRS	Rwy Idg	N/A
111.2	223°	TDZE	N/A
Chan 49		Apt Elev	1126

When local altimeter setting not received, use Owatonna altimeter setting and increase all MDA 40 feet.

MISSED APPROACH: Climb to 2900 then right turn direct FOW VOR/DME and hold.

AWOS-3 371	MINNEAPOLIS CENTER 132.35 307.3	UNICOM 122.8 (CTAF)
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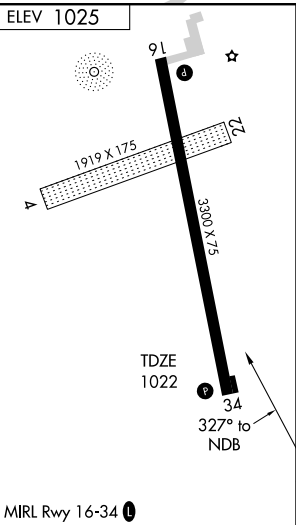
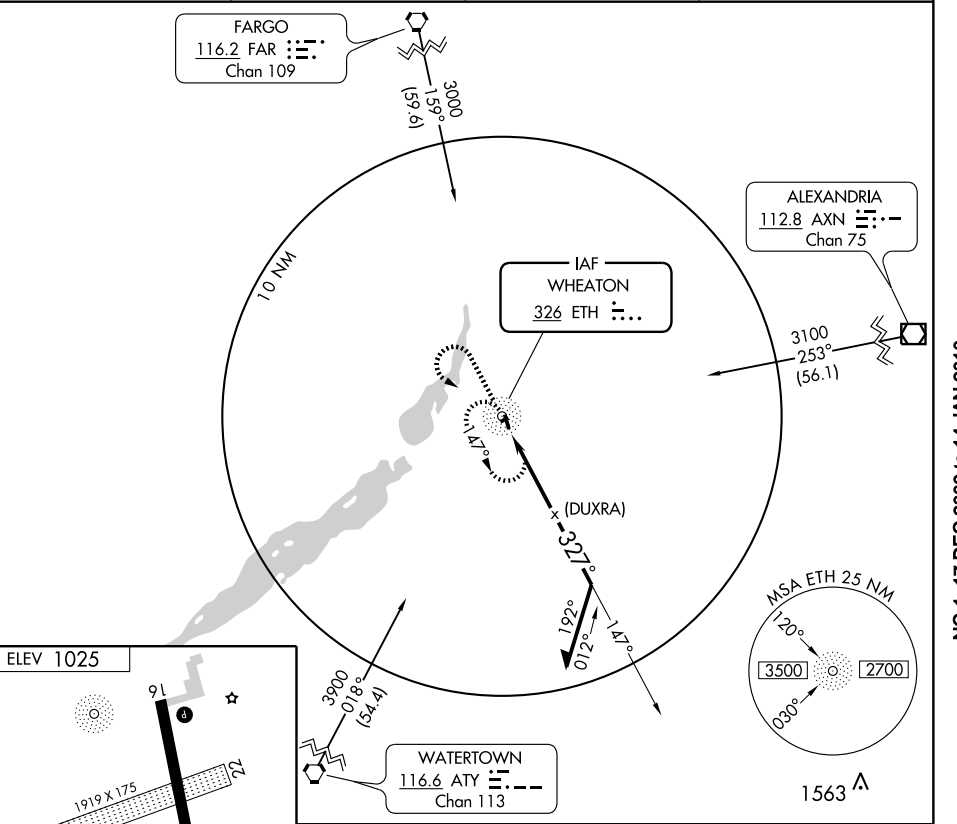


CATEGORY	A	B	C	D	FAF to MAP 5 NM					
CIRCLING	1620-1	1640-1	1660-1½	NA	Knots	60	90	120	150	180
	494 (500-1)	514 (600-1)	534 (600-1½)		Min:Sec	5:00	3:20	2:30	2:00	1:40

NDB ETH	APP CRS	Rwy Idg	3300
326	327°	TDZE	1022
		Apt Elev	1025

NA	MISSED APPROACH: Climb to 3000 then left turn direct ETH NDB and hold.
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AWOS-3 326	MINNEAPOLIS CENTER 126.1 269.2	PRINCETON RADIO 122.25	UNICOM 122.8 (CTAF)
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3000	ETH 	NDB	147°	2700	327°	4 NM	Remain within 10 NM
CATEGORY	A	B	C	D			
S-34	1540-1	518 (600-1)	1540-1½ 518 (600-1½)	NA			
CIRCLING	1540-1	515 (600-1)	1540-1½ 515 (600-1½)	NA			

NC-1: 17 DEC 2009 to 14 JAN 2010

LOC I-BDH 109.5	APP CRS 126°	Rwy Idg TDZE Apt Elev 5500 1124 1126
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ILS or LOC RWY 13

WILLMAR MUNI-JOHN L RICE FIELD (BDH)

▼ If local altimeter setting not received, use Olivia Rgnl altimeter setting and increase all DAs 55 feet and all MDAs 60 feet.

▲ NA

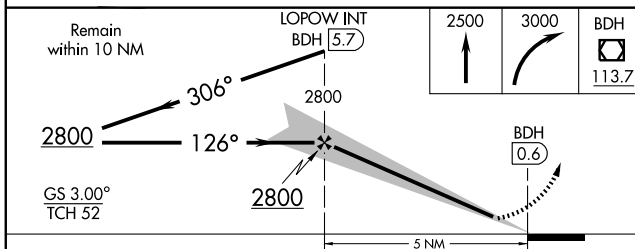
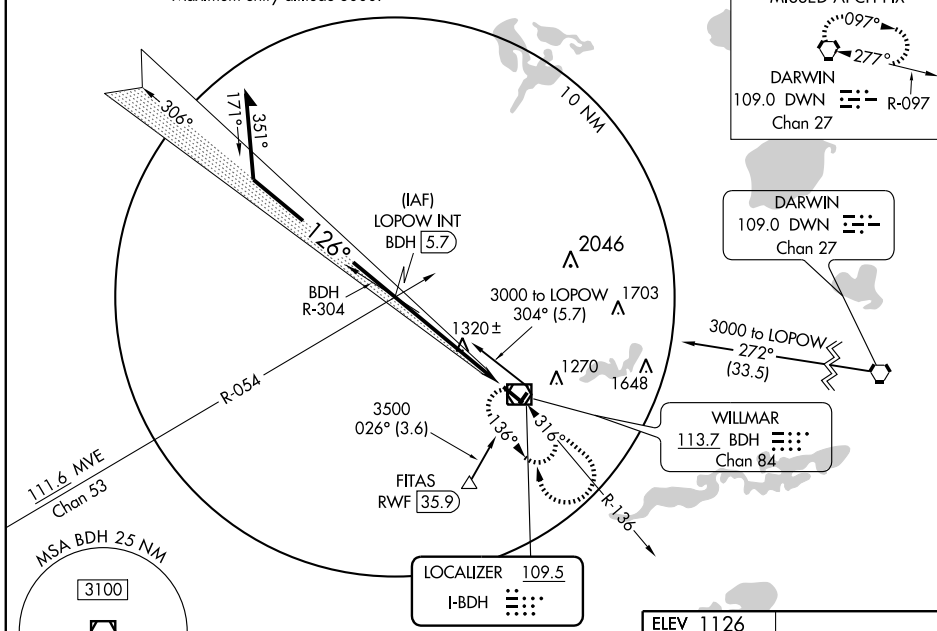
MISSED APPROACH: Climb to 2500 then climbing right turn to 3000 direct BDH VOR/DME and hold.

AWOS-3
113.7

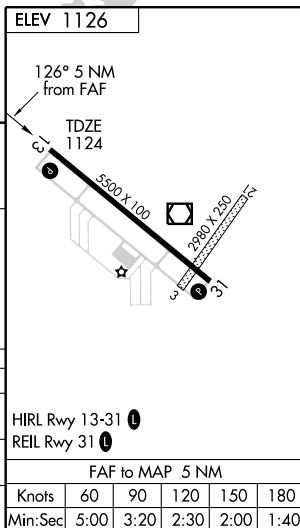
MINNEAPOLIS CENTER
125.5 323.1

UNICOM
122.8 (CTAF) 0

Maximum entry altitude 6000.



CATEGORY	A	B	C	D
S-ILS 13	1324- ³ / ₄ 200 (200- ³ / ₄)			
S-LOC 13	1620-1	496 (500-1)	1620-1 ¹ / ₄ 496 (500-1 ¹ / ₄)	1620-1 ¹ / ₂ 496 (500-1 ¹ / ₂)
CIRCLING	1620-1	494 (500-1)	1620-1 ¹ / ₂ 494 (500-1 ¹ / ₂)	1680-2 554 (600-2)



HIRL Rwy 13-31 **0**
REIL Rwy 31 **0**

FAF to MAP 5 NM

Knots	60	90	120	150	180
Min:Sec	5:00	3:20	2:30	2:00	1:40

T

If local altimeter setting not received, use Olivia Rgnl altimeter setting and increase all DAs/MDAs 60 feet. DME/DME RNP -0.3 NA.

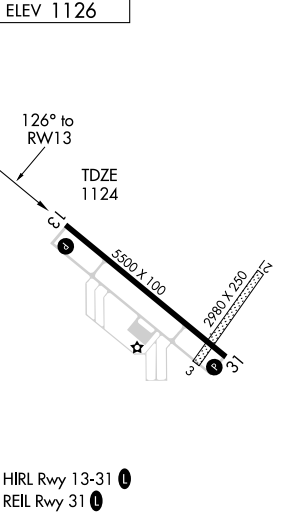
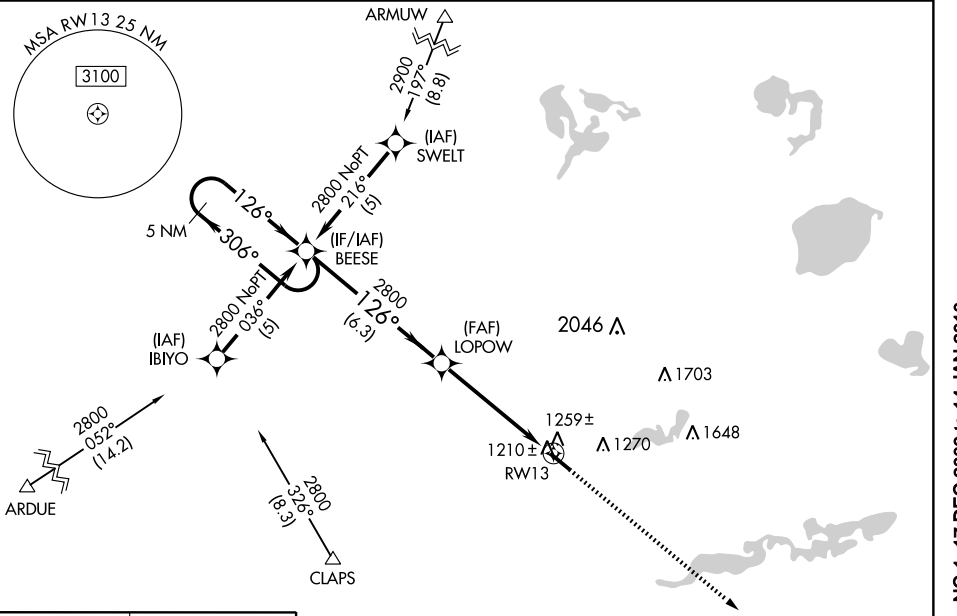
A

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (116°F).

Baro-VNAV and VDP NA when using Olivia Rgnl altimeter setting.

MISSED APPROACH: Climb to 2800 direct HEPV and hold.

AWOS-3 113.7	MINNEAPOLIS CENTER 125.5 323.1	UNICOM 122.8 (CTAF) 0
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5 NM Holding Pattern		BEESE	LOPOW	HEPV
2800		306°	126°	126°
GS 3.00°				
TCH 52				
		6.3 NM	3.6 NM	1.4 NM
CATEGORY	A	B	C	D
LPV DA	1387-1 263 (300-1)			
LNAV/VNAV DA	1480-1¼ 356 (400-1¼)			
LNAV MDA	1620-1 496 (500-1)	1620-1¼ 496 (500-1¼)	1620-1½ 496 (500-1½)	1680-2 554 (600-2)
CIRCLING	1620-1 494 (500-1)	1620-1½ 494 (500-1½)	1680-2 554 (600-2)	

NC-1: 17 DEC 2009 to 14 JAN 2010

⚠

▲

If local altimeter setting not received, use Olivia Rgnl altimeter setting and increase all MDAs 60 feet.
VDP NA with Olivia Rgnl altimeter setting.
DME/DME RNP -0.3 NA.

MISSED APPROACH: Climb to 2800 direct BEESE and hold.

AWOS-3 113.7	MINNEAPOLIS CENTER 125.5 323.1	UNICOM 122.8 (CTAF) 1
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Procedure NA for arrival at RWF VOR/DME on airway radials 054 CW 060.

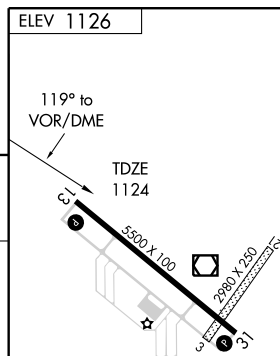
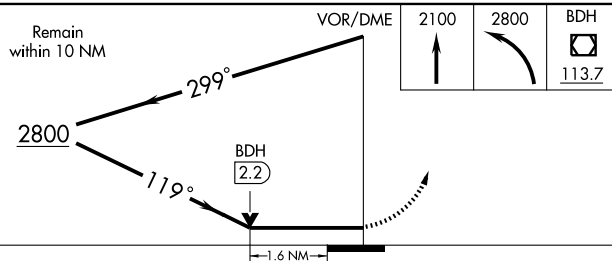
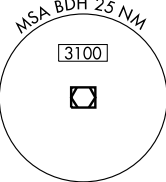
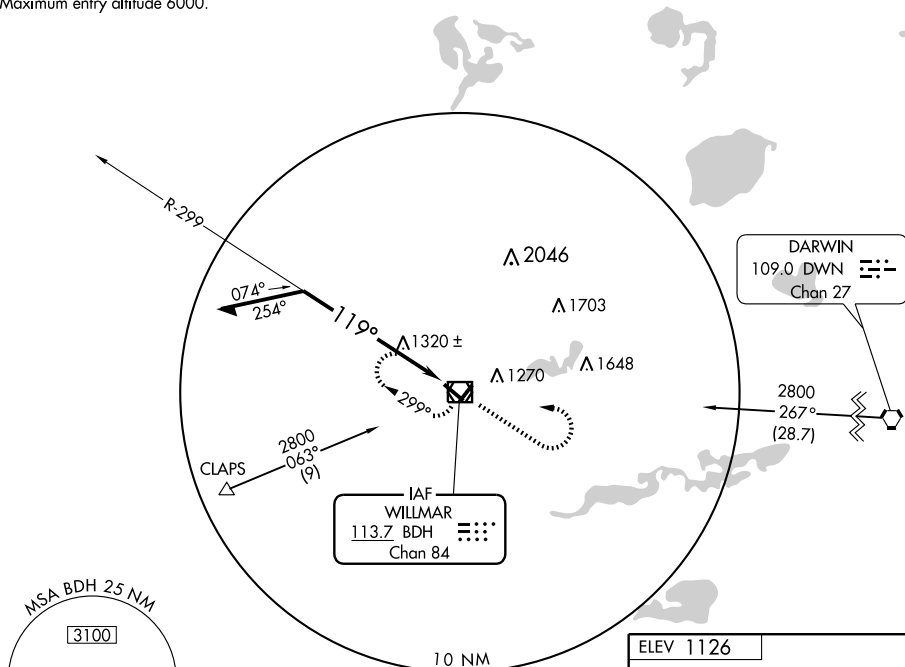
CATEGORY	A	B	C	D
LNAV MDA	1500-1	374 (400-1)		1500-1¼ 374 (400-1¼)
CIRCLING	1520-1 394 (400-1)	1580-1 454 (500-1)	1580-1½ 454 (500-1½)	1680-2 554 (600-2)

HIRL Rwy 13-31 **1**
REIL Rwy 31 **1**

NC-1. 17 DEC 2009 to 14 JAN 2010

MISSED APPROACH: Climb to 2100, then climbing left turn to 2800 direct BDH VOR/DME and hold.

Maximum entry altitude 6000.



CATEGORY	A	B	C	D
S-13	1680-1	556 (600-1)	1680-1½ 556 (600-½)	1680-1¾ 556 (600-1¼)
CIRCLING	1680-1	554 (600-1)	1680-1½ 554 (600-½)	1680-2 554 (600-2)

REIL Rwy 31 L

VOR/DME BDH 113.7 Chan 84	APP CRS 316°	Rwy Idg TDZE Apt Elev 5500 1126 1126
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VOR RWY 31

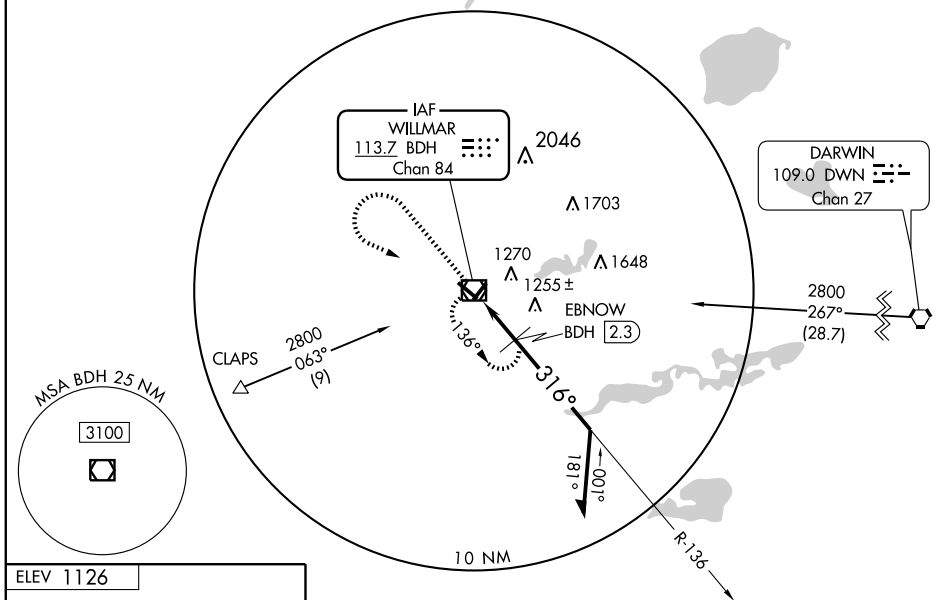
WILLMAR MUNI-JOHN L RICE FIELD (BDH)

▼ If local altimeter setting not received, use Olivia Rgnl altimeter setting and increase all MDAs 60 feet.
▲ VDP NA with Olivia Rgnl altimeter setting.

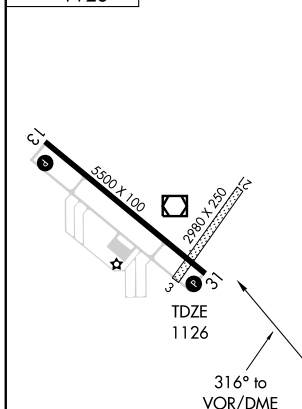
MISSED APPROACH: Climb to 2000, then climbing left turn to 2800 direct BDH VOR/DME and hold.

AWOS-3 113.7	MINNEAPOLIS CENTER 125.5 323.1	UNICOM 122.8 (CTAF) 0
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Maximum entry altitude 6000.



ELEV 1126

HIRL Rwy 13-31 **0**REIL Rwy 31 **0**

	2000	2800	BDH 113.7	VOR/DME	Remain within 10 NM
	↑	↶			
	*1860 when using Olivia Rgnl altimeter setting.				
				EBNOW BDH 2.3	2800
				BDH 1.4	316°
				2.97° TCH 49	*1800
				1.1 NM	0.9 NM
CATEGORY	A	B	C	D	
S-31	1800-1	674 (700-1)	1800-2 674 (700-2)	1800-2 1/4 674 (700-2 1/4)	
CIRCLING	1800-1	674 (700-1)	1800-2 674 (700-2)	1800-2 1/4 674 (700-2 1/4)	
EBNOW FIX MINIMUMS					
S-31	1520-1 394 (400-1)			1520-1 1/4 394 (400-1 1/4)	
CIRCLING	1520-1 394 (400-1)	1580-1 454 (500-1)	1580-1 1/2 454 (500-1 1/2)	1680-2 554 (600-2)	

NDB	MWM	APP CRS	Rwy Idg	3599
203		177°	TDZE	1410
			Apt Elev	1410

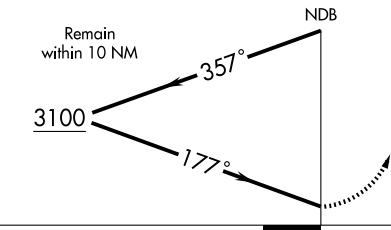
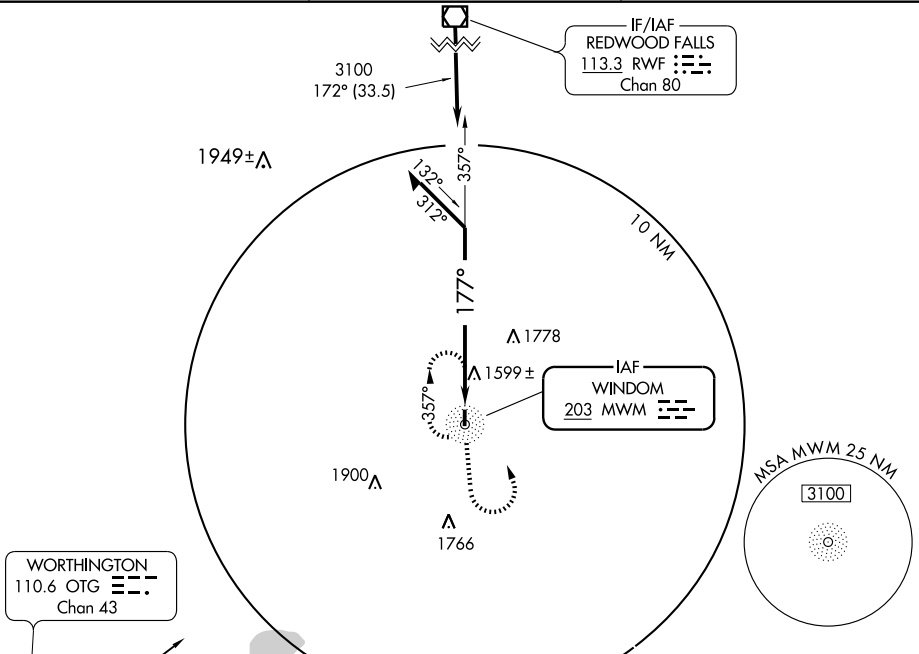
NDB RWY 17

WINDOM MUNI (MWM)

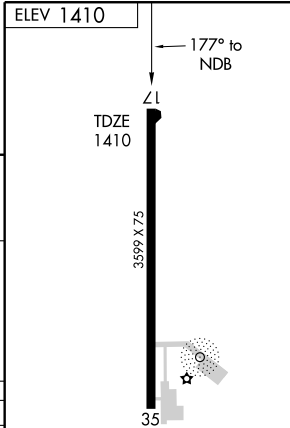
Circling not authorized at night to Rwy 35.

MISSED APPROACH: Climb to 2500 then climbing left turn to 3100 direct MWM NDB and hold.

AWOS-3 118.525	MINNEAPOLIS CENTER 127.1 290.2	CTAF 122.9
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2500	3100	MWM 203
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CATEGORY	A	B	C	D
S-17	1960-1	550 (600-1)	1960-1½ 550 (600-1½)	NA
CIRCLING	1960-1	550 (600-1)	1960-1½ 550 (600-1½)	NA

MIRL Rwy 17-35
REIL Rws 17 and 35

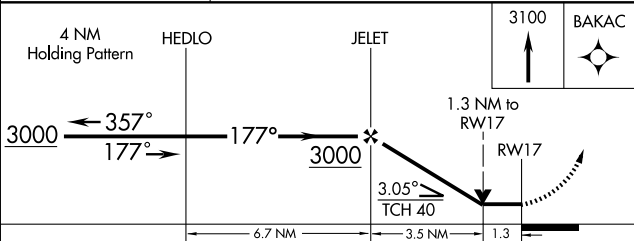
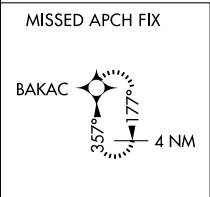
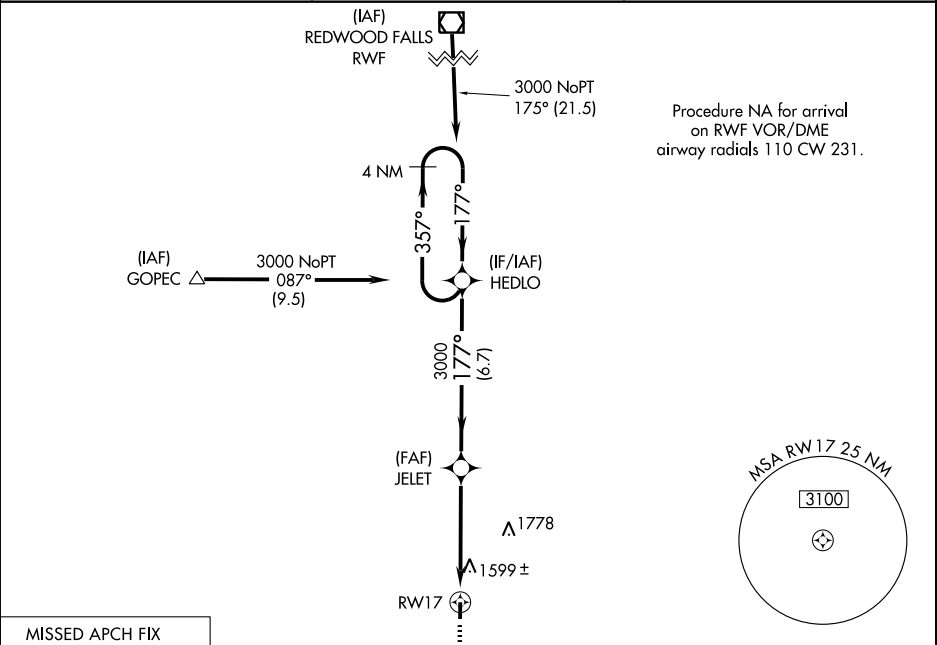
APP CRS	Rwy Idg	3599
177°	TDZE	1410
	Apt Elev	1410

RNAV (GPS) RWY 17

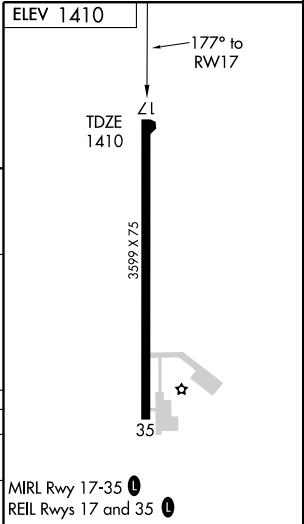
WINDOM MUNI (MWM)

NA	GPS or RNP-0.3 required. DME/DME RNP-0.3 NA. Circling not authorized at night to Rwy 35.	MISSED APPROACH: Climb to 3100 direct BAKAC and hold.
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AWOS-3 118.525	MINNEAPOLIS CENTER 127.1 290.2	CTAF 122.9
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CATEGORY	A	B	C	D
RNAV MDA	1860-1	450 (500-1)	1860-1¼ 450 (500-1¼)	NA
CIRCLING	1900-1	490 (500-1)	1900-1½ 490 (500-1½)	NA



APP CRS	Rwy Idg	3599
357°	TDZE	1410
	Apt Elev	1410

RNAV (GPS) RWY 35

WINDOM MUNI (MWM)

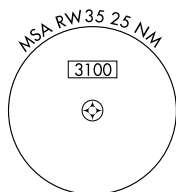
A NA GPS or RNP-0.3 required. DME/DME RNP-0.3 NA. Procedure not authorized at night.

MISSED APPROACH: Climb to 3000 direct HEDLO WP and hold.

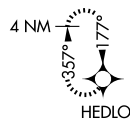
AWOS-3
118.525

MINNEAPOLIS CENTER
127.1 290.2

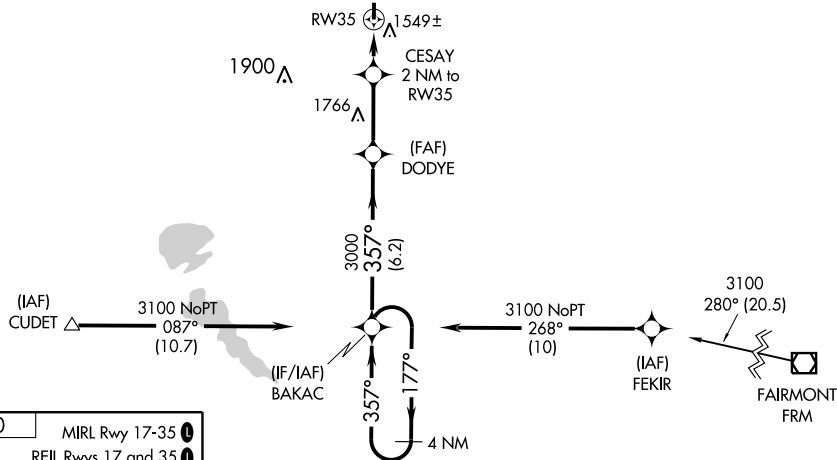
CTAF
122.9



MISSED APCH FIX

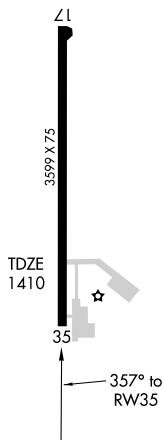


Λ 1778



Procedure NA for arrival on FRM VOR/DME airway radials 217 CW 336 and arrivals at CUDET via V250 southwestbound.

ELEV 1410	MIRL Rwy 17-35	L
	REIL Rwy 17 and 35	L

4 NM
Holding Pattern

BAKAC

DODYE

CESAY

2 NM to

RW35

40



080

1M	2M
----	----

00-1½

(500-1½)

CATEGORY	A	B	C	D
LNAV MDA	1800-1 390 (400-1)			NA
CIRCLING	1900-1 490 (500-1)		1900-1½ 490 (500-1½)	NA

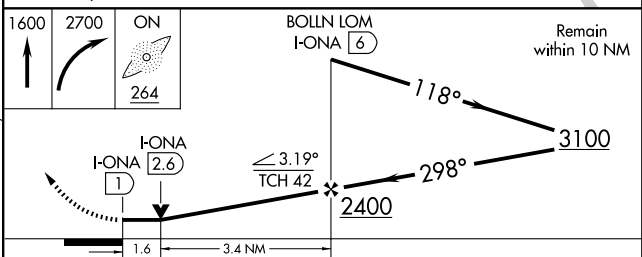
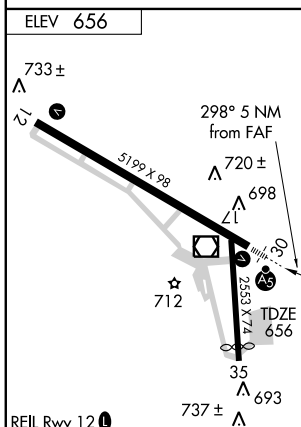
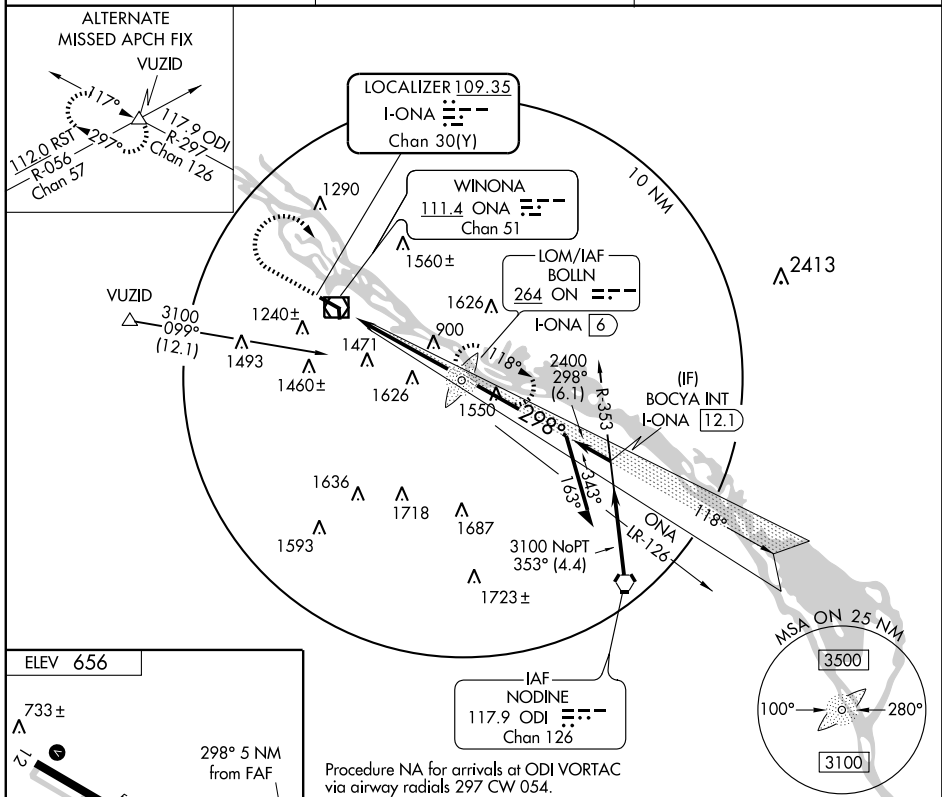
LOC/DME I-ONA 109.35 Chan 30(Y)	APP CRS 298°	Rwy Idg TDZE 656 Apt Elev 656
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LOC RWY 30

WINONA MUNI-MAX CONRAD FIELD (ONA)

<p>ADF required. When local altimeter setting not received, use La Crosse altimeter setting and increase all MDA 60 feet and increase S-30 Cats C and D visibility ¼ mile. VDP NA when using La Crosse altimeter setting.</p>	<p>MALSR</p>	<p>MISSED APPROACH: Climb to 1600 then climbing right turn to 2700 direct BOLLN LOM/I-ONA 6 DME and hold.</p>
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AWOS-3 111.4	MINNEAPOLIS CENTER 128.6 363.0	UNICOM 122.8 (CTAF) 1
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FAF to MAP 5 NM					
Knots	60	90	120	150	180
Min:Sec	5:00	3:20	2:30	2:00	1:40
CATEGORY	A	B	C	D	
S-30	1200-1½	544 (600-½)	1200-1 544 (600-1)	1200-1¼ 544 (600-1¼)	
CIRCLING	1600-1¼ 944 (1000-1¼)	1620-1½ 964 (1000-1½)	1640-3 984 (1000-3)	1840-3 1184 (1200-3)	

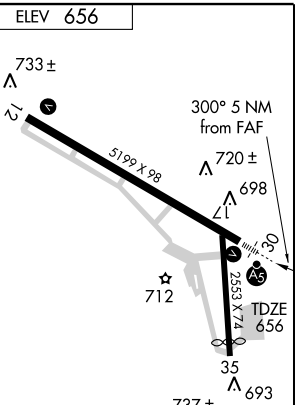
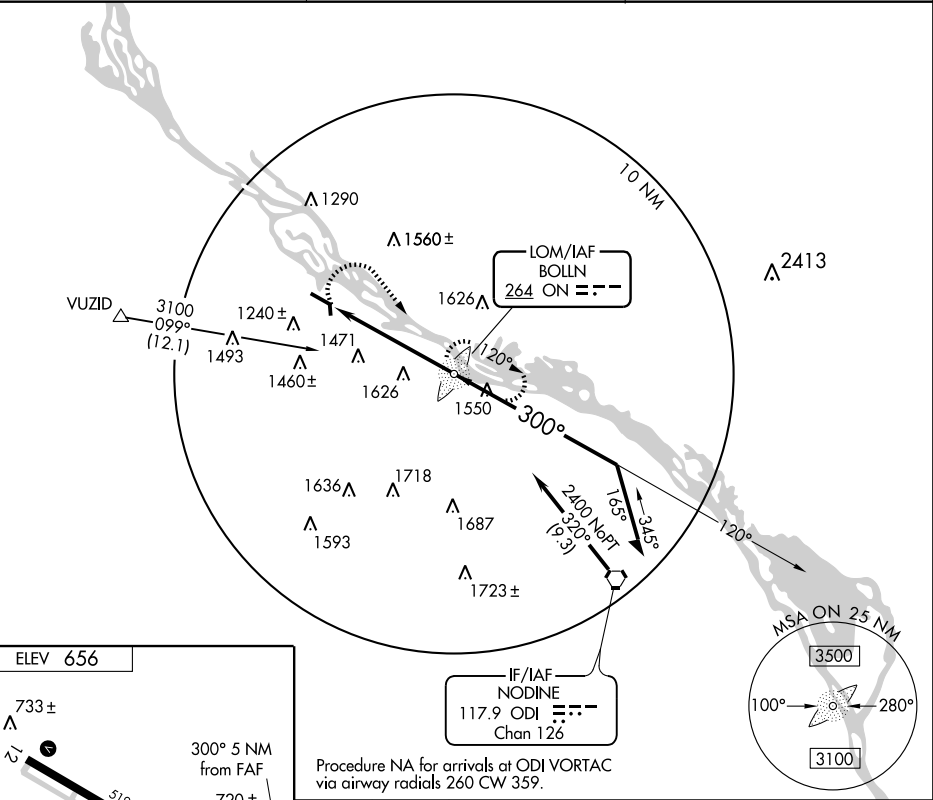
LOM ON	APP CRS	Rwy Idg	5199
264	300°	TDZE	656
		Apt Elev	656

NDB RWY 30

WINONA MUNI-MAX CONRAD FIELD (ONA)

<p>NA</p> <p>Inoperative table does not apply to Cat A. When local altimeter setting not received, use La Crosse altimeter setting and increase all MDA 60 feet.</p>	<p>MALSR</p> <p></p>	<p>MISSED APPROACH: Climbing right turn to 2700 direct BOLLN LOM and hold.</p>
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<p>AWOS-3</p> <p>111.4</p>	<p>MINNEAPOLIS CENTER</p> <p>128.6 363.0</p>	<p>UNICOM</p> <p>122.8 (CTAF) 1</p>
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FAF to MAP 5 NM					
Knots	60	90	120	150	180
Min:Sec	5:00	3:20	2:30	2:00	1:40

<p>2700</p> <p></p> <p>ON</p> <p>264</p>		<p>BOLLN LOM</p> <p>120°</p> <p>300°</p> <p>3100</p> <p>2400</p> <p>≤ 3.19° TCH 42</p> <p>5 NM</p>		<p>Remain within 10 NM</p>	
CATEGORY	A	B	C	D	
S-30	1980-1¼ 1324 (1400-1¼)		1980-2½ 1324 (1400-2½)	1980-2¾ 1324 (1400-2¾)	
CIRCLING	1980-1¼ 1324 (1400-1¼)	1980-1½ 1324 (1400-1½)	1980-3 1324 (1400-3)		

APP CRS	Rwy Idg	5199
287°	TDZE	656
	Apt Elev	656

RNAV (GPS) RWY 30

WINONA MUNI-MAX CONRAD FIELD (ONA)



GPS or RNP- 0.3 required. DME/DME RNP- 0.3 NA.

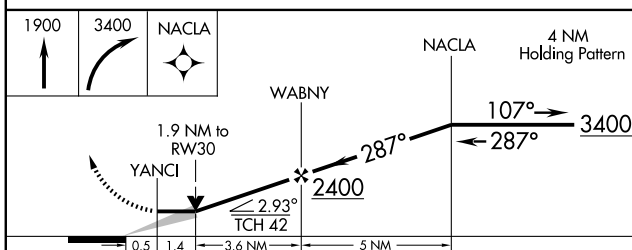
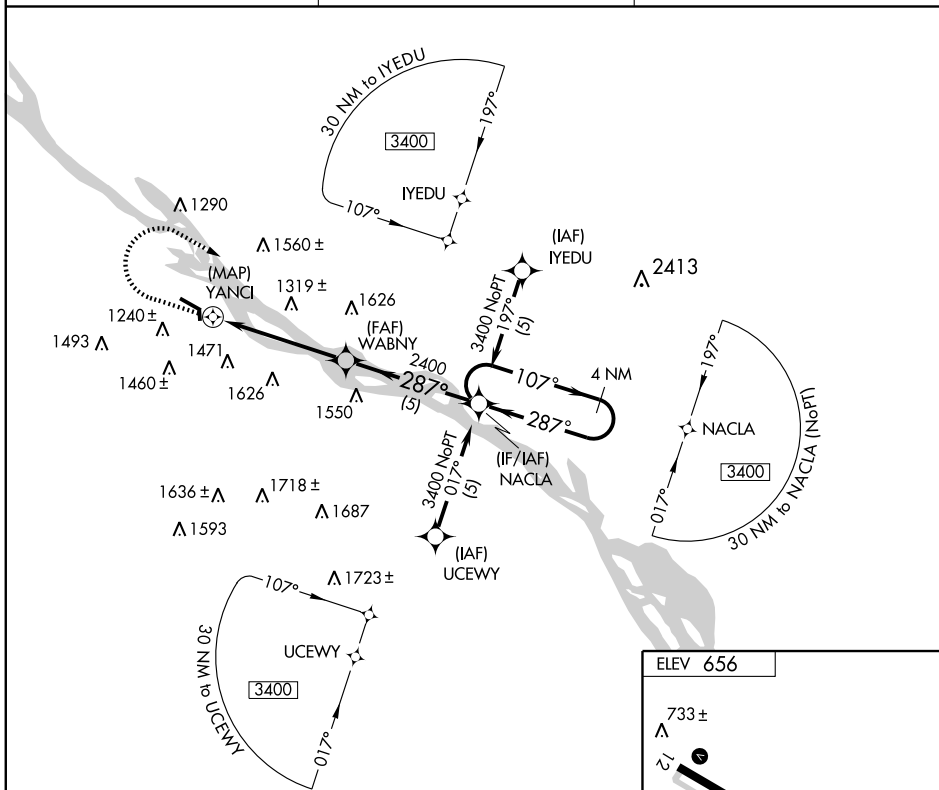


MISSED APPROACH: Climb to 1900, then climbing right turn to 3400 direct NACLA WP and hold.

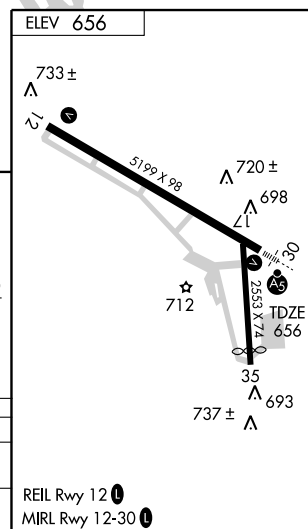
AWOS-3
111.4

MINNEAPOLIS CENTER
128.6 363.0

UNICOM
122.8 (CTAF) **L**



CATEGORY	A	B	C	D
LNAV MDA	1460- $\frac{1}{2}$ 804 (900- $\frac{1}{2}$)	1460- $\frac{3}{4}$ 804 (900- $\frac{3}{4}$)	1460-1 $\frac{1}{4}$ 804 (900-1 $\frac{1}{4}$)	1460-2 804 (900-2)
CIRCLING	1600-1 $\frac{1}{4}$ 944 (1000-1 $\frac{1}{4}$)	1620-1 $\frac{1}{2}$ 964 (1000-1 $\frac{1}{2}$)	1620-3 964 (1000-3)	1840-3 1184 (1200-3)



VOR/DME ONA 111.4 Chan 51	APP CRS 142°	Rwy Idg N/A TDZE N/A Apt Elev 656
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VOR-A
WINONA MUNI-MAX CONRAD FIELD (ONA)

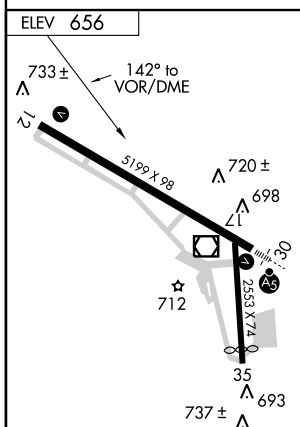
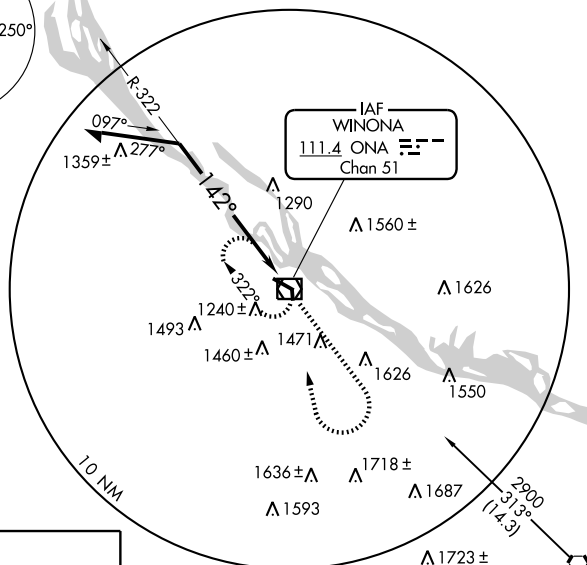
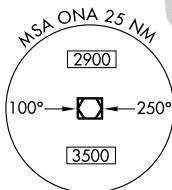
T
A NA

MISSED APPROACH: Climb to 2900 then right turn direct ONA VOR/DME and hold.

AWOS-3
111.4

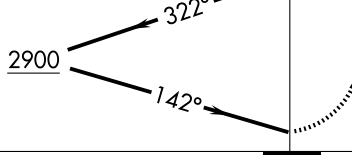
MINNEAPOLIS CENTER
128.6 363.0

UNICOM
122.8 (CTAF) **L**



Remain
within 10 NM

VOR/DME



2900



ONA

 111.4

REIL Rwy 12 **L**
MIRL Rwy 12-30 **L**

CATEGORY	A	B	C	D
CIRCLING	1660-1¼ 1004 (1100-1¼)	1660-1½ 1004 (1100-1½)	1660-3 1004 (1100-3)	1840-3 1184 (1200-3)

VOR/DME ONA
111.4
Chan **51**

APP CRS
292°

Rwy Idg
TDZE
Apt Elev **5199**
656
656

VOR RWY 30

WINONA MUNI-MAX CONRAD FIELD (ONA)

NA

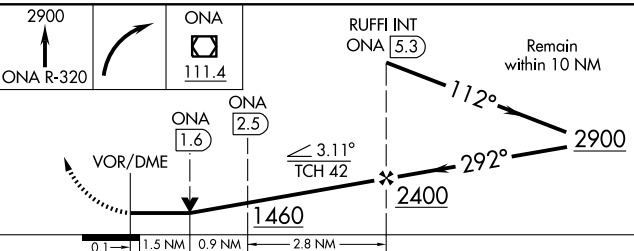
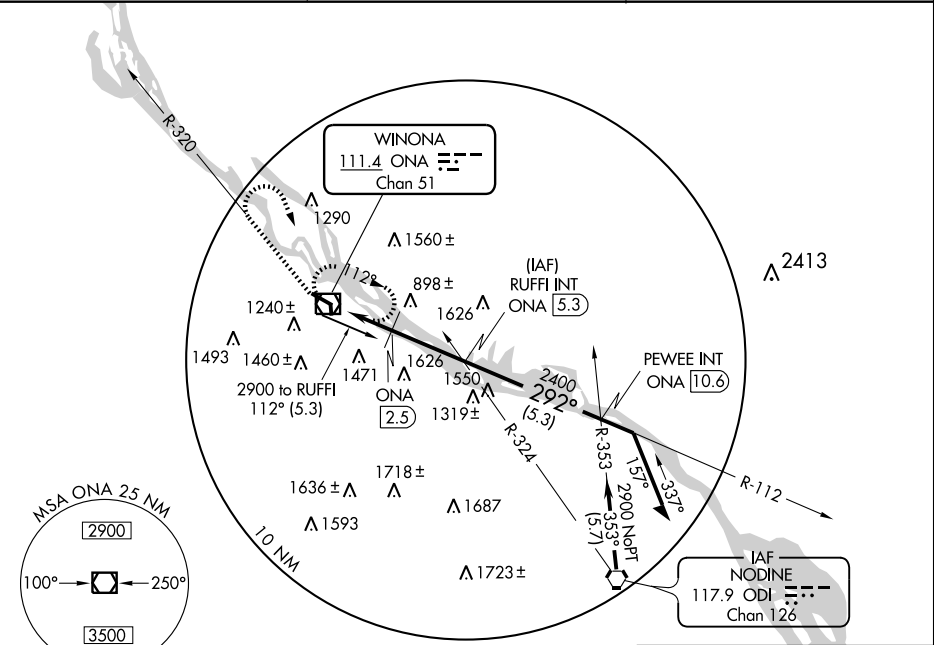
MALS R

MISSED APPROACH: Climb to 2900 via ONA R-320 then right turn direct ONA VOR/DME and hold.

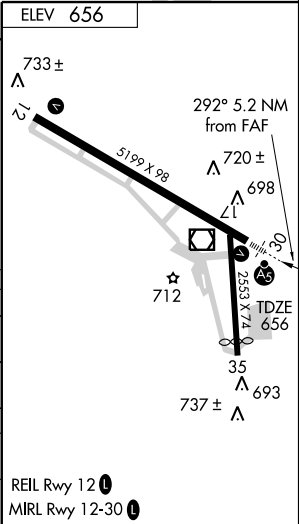
AWOS-3
111.4

MINNEAPOLIS CENTER
128.6 363.0

UNICOM
122.8 (CTAF)



CATEGORY	A	B	C	D
S-30	1460-½ 804 (900-½)	1460-¾ 804 (900-¾)	1460-1¼ 804 (900-1¼)	1460-2 804 (900-2)
CIRCLING	1600-1¼ 944 (1000-1¼)	1620-1½ 964 (1000-1½)	1620-3 964 (1000-3)	1840-3 1184 (1200-3)
DME MINIMUMS				
S-30	1160-½ 504 (600-½)	1160-1 504 (600-1)	1160-1 504 (600-1)	1160-1 504 (600-1)
CIRCLING	1600-1¼ 944 (1000-1¼)	1620-1½ 964 (1000-1½)	1620-3 964 (1000-3)	1840-3 1184 (1200-3)



LOC I-OTG
111.7

APP CRS
288°

Rwy Idg	5499
TDZE	1570
Apt Elev	1574

ILS RWY 29
WORTHINGTON MUNI (OTG)



ANA

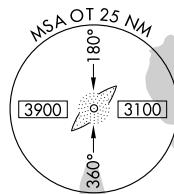
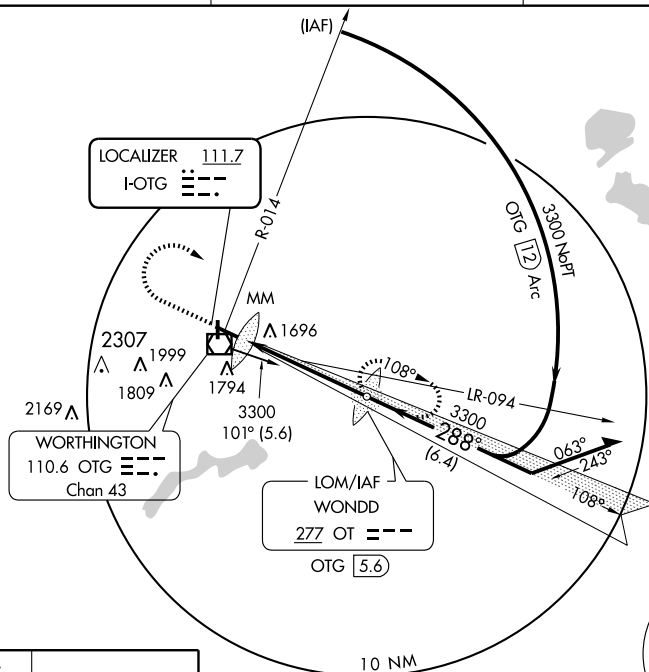
MALSR



MISSED APPROACH: Climb to 2500 then climbing right to 3300 direct WONDD LOM/OTG 5.6 DME and hold.

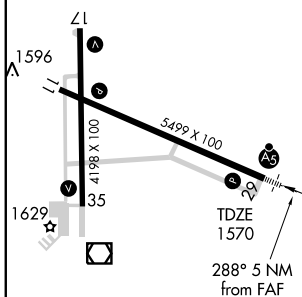
AWOS-3
110.6

MINNEAPOLIS CENTER
132.05 317.4

UNICOM
122.8 (CTAF) **L**

NC-1. 17 DEC 2009 to 14 JAN 2010

ELEV 1574

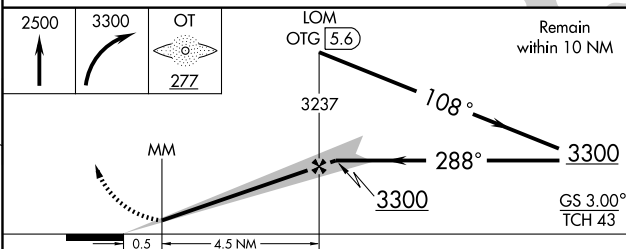
MIRL Rwy 17-35 **L**HIRL Rwy 11-29 **L**

REIL Rwy 11, 17, and 35 L

FAF to MAP 5 NM

Knots	60	90	120	150	180
Min:Sec	5:00	3:20	2:30	2:00	1:40

ADF or DME REQUIRED



CATEGORY	A	B	C	D
S-ILS 29	1770-½ 200 (200-½)			
S-LOC 29	1920-½ 350 (400-½)			1920-¾ 350 (400-¾)
CIRCLING	2100-1 526 (600-1)		2100-1½ 526 (600-1½)	2140-2 566 (600-2)

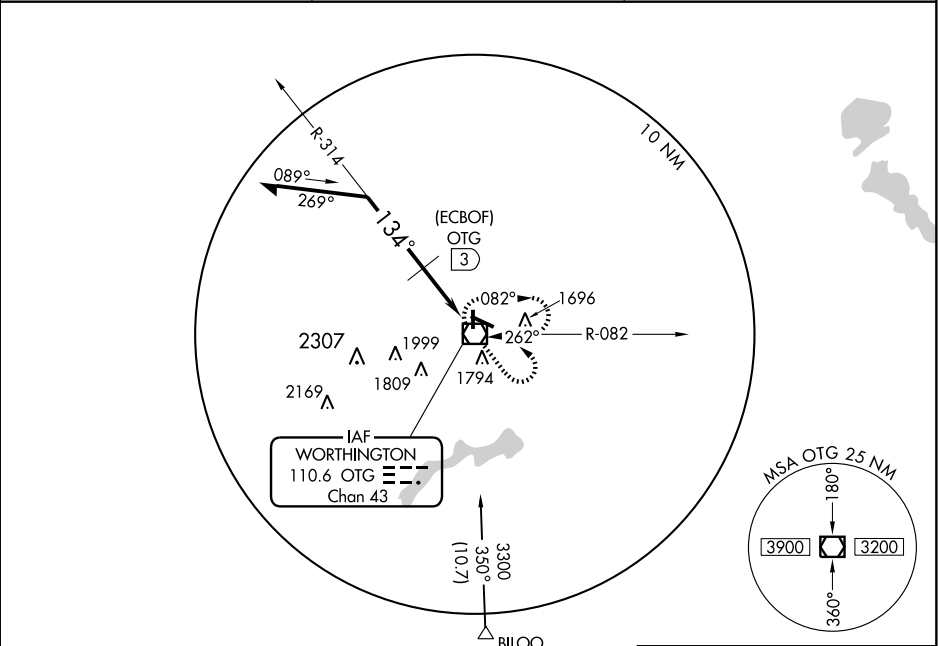
VOR/DME OTG	APP CRS	Rwy Idg	5499
110.6	134°	TDZE	1574
Chan 43		Apt Elev	1574

VOR or GPS RWY 11
WORTHINGTON MUNI (OTG)

▼
▲

MISSED APPROACH: Climb to 2700 then climbing left turn to 3300 direct to OTG VOR/DME and hold.

AWOS-3 110.6	MINNEAPOLIS CENTER 132.05 317.4	UNICOM 122.8 (CTAF) 0
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Remain within 10 NM

VOR/DME

3300

314°

(ECBOF) OTG 3

134°

2260

2.35° TCH 42

2.4 NM

2700

3300

OTG 110.6

VGSI and descent angles not coincident.

ELEV 1574

1596

1629

TDZE 1574

4198 X 100

35

5499 X 100

134° to VOR/DME

CATEGORY	A	B	C	D
S-11	2260-1	686 (700-1)	2260-2 686 (700-2)	2260-2¼ 686 (700-2¼)
CIRCLING	2260-1	686 (700-1)	2260-2 686 (700-2)	2260-2¼ 686 (700-2¼)
DME MINIMUMS				
S-11	2020-1	446 (500-1)	2020-1¼ 446 (500-1¼)	2020-1½ 446 (500-1½)
CIRCLING	2100-1	526 (600-1)	2100-1½ 526 (600-1½)	2140-2 566 (600-2)

MIRL Rwy 17-35 **0**

HIRL Rwy 11-29 **0**

REIL Rws 11, 17, and 35 **0**

VOR/DME OTG 110.6 Chan 43	APP CRS 170°	Rwy Idg 4198 TDZE 1574 Apt Elev 1574
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VOR or GPS RWY 17
WORTHINGTON MUNI (OTG)

T

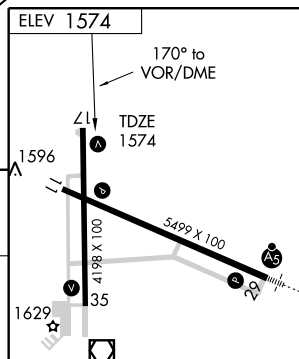
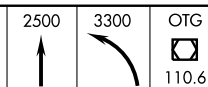
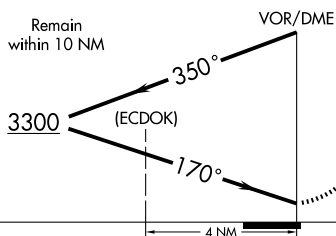
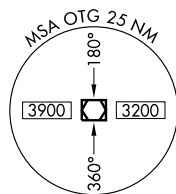
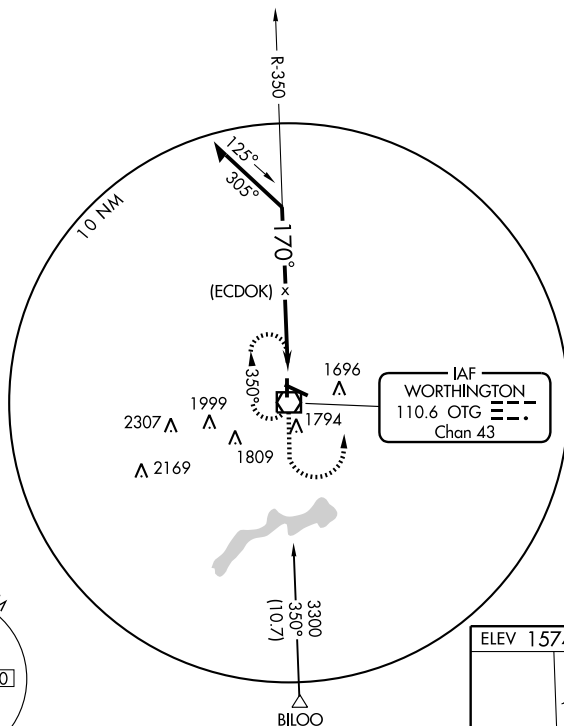
MISSED APPROACH: Climb to 2500 then climbing left turn to 3300 direct OTG VOR/DME and hold.

AWOS-3
110.6

MINNEAPOLIS CENTER
132.05 317.4

UNICOM
122.8 (CTAF) **L**

Λ 2539



CATEGORY	A	B	C	D
S-17	2000-1	426 (500-1)	2000-1¼	426 (500-1¼)
CIRCLING	2100-1	526 (600-1)	2100-1½ 526 (600-1½)	2140-2 566 (600-2)

MIRL Rwy 17-35 **L**
HIRL Rwy 11-29 **L**
REIL Rwy 11, 17, and 35 **L**



MISSED APPROACH: Climb to 2700 then climbing right turn to 3300 direct OTG VOR/DME and hold.

AWOS-3
110.6

MINNEAPOLIS CENTER
132.05 317.4

UNICOM
122.8 (CTAF) 

